47th Year
No. 32

December, 1907

50c. a Year
5c. a Copy

AMERICAN BEE JOURNAL

Louis H. Scholl, (See page 747)

A Pioneer California Apiary.
(Established by A. D. Pryal, in 1865, but owned for many years past by his son. See page 743.)

American Bee Journal

THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY

GEORGE W. YORK & COMPANY

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2d.—To protect and defend its members in their lawful rights.

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Apiarian Pictures

We would be glad to have those who can do so, send us pictures of bee-yards, or of anything else that would be of interest along the line of bee-keeping.

Contents for December, 1907

ILLUSTRATIONS—
Comb Built on Division-Board 753
Pioneer California Apiary ..... Front Page
Scholl, Louis H ..... Front Page
Uncapping Fork 743

EDITORIAL NOTES AND COMMENTS—
Feeding Bees for Winter in Canada 741
Illinois State Convention 742
Invitation to Readers 742
Merry Christmas—Happy New Year 741
Parcels Post in the United States 742
Reading Bee-Literature 742
Report on Bees and Honey for 1907 741
Specialty Not Best for Every One 741
Study the Subject of Bee-Keeping 742
Two-Queen Plan 742
Where to Put a Caged Queen 742
World's Pure Food Show 742

MISCELLANEOUS NEWS-ITEMS—
Bee-Keeping in Australia and Here 743
Bees Attack Passengers 743
Chicago-Northwestern Convention 744
"Gus Dittmer Company" 744
Index for 1907 743
Japanese Bees 743
"Langstroth on the Honey-Bee" 744
Michigan Convention 744
Old Apiary in California 743
Result of National Election 744
Tennessee Fair Apiarian Premiums 744
"The Golden Bee"—Wonderful! 743
Uncapping Fork 743
Wedding Bells in Missouri 744

CANADIAN BEEDOM—
Comb Honey Production 746
Distribution of Honey 745
Extracted Honey Production 746
Foul Brood 745
Foul Brood and Black Brood 746
Price of Good Honey 745
Report of Ontario Convention 745
Requeening Colonies 745
Wax-Presses 745

OUR BEE-KEEPING SISTERS—
Confection of Tomatoes and Honey 746
Feeding Bees Through a Sponge 746
Honey One Bee Gathers in Its Lifetime 746
Section Honey in a Bee-Tree 746
When to Cellar the Bees 746

BIOGRAPHS OF BEEDOMITES—
Glimpses of Southwestern Apiculture, and a Sketch of One of Its Leading Representatives, Louis H. Scholl 747

CONTRIBUTED ARTICLES—
Eucalyptus Honey 749
History of Honey Committee 750
Honey Crop Reports and Prices 749
Importance of Good Food 749
Nutrition and Activity 749
Problem of Wintering Bees 749
Production and Ripening of Extracted Honey 750
Quiet Very Essential 749
Some of the Results of Bee-Keeping in 1907 751
Wholesome Winter Stores 749

REFLECTIONS OF CALIFORNIA BEE-KEEPER
California—A Modern Mecca 752
Death of A. D. Pryal 752
Freakish Things Bees Do 753
Honey Prices Up 752
In Union There is Strength 752
Pepper Tree and Eucalyptus 752

SOUTHERN BEEDOM—
Bee-Keepers' Exhibit at the San Antonio International Fair, Nov. 9 to Nov. 24 753
Bees Gather Rosin 753
Prospects for 1908 753

DOCTOR MILLER'S QUESTION-BOX—
Amount of Sugar for a Pound of Honey 755
Answering Questions 757
Bees by the Pound 754
Bees Deserting the Hive 756
Black Bees in Italian Colony 757
Disease Carried by the Queen, Etc. 754
Do Bees Store Candy Feed? 756
Fall Feeding 757
Hives Full of Frames for Winter 755
Home-Made Comb Foundation 756
Late Feeding of Bees for Winter 755
Location for Observation Hive 755
Moth-Eaten Combs—Pollen 755
Non-Hatching Eggs 757
Packing Bees for Winter 754
Preventing Swarming 755
Queen-Bee to Start a Colony 756
Rearing Queens 756
Roofing-Paper for Winter Cases 756
Tartaric Acid in Winter Stores 757
Wide-Top Section-Holders 754
Wintering Bees Under Snow-Drifts 757
Wintering on Summer Stands 756

REPORTS AND EXPERIENCES—
Extra Year for Bees 758
Fair Fall Crop of Honey 758
Fine Shape for Winter 758
Honey and Prices Better 758
Keeping Bees for Pleasure 758
Outlook Good in Cuba 758
Rocky Mountain Honey 758
Virginia Bee-Keeping 758
Wintering on Summer Stands 758

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SEND ALL ORDERS TO THE AMERICAN BEE JOURNAL, 118 W. Jackson, Chicago, Ill.

American Bee Journal

Trade Notes
The A. I. Root Company, Medina, Ohio

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An unsolicited statement of the matter from an Illinois bee-keeper:

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SASH, DOORS, BLINDS

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ESTIMATES FURNISHED ON APPLICATION

Freeport, Ill., June 11, 1907.

The A. I. Root Co.,
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I received five of your AE52S–10 hives yesterday and find that I cannot make my own hives and supplies as cheap as yours and use the same quality of lumber. You can see by the head of this letter that if anyone can make hives cheaper than your prices or any of the so–called "trust hive" manufacturers, I ought to be able to do it, but using the same quality of lumber I cannot.

Yours very truly,
(Signed) John H. Bamberger.

☞ **The above is a representative letter from the many we have to the effect that our hives and other supplies can be purchased cheaper than a local mill can possibly make them. Our enormous output enables us to reduce the cost to the minimum without sacrificing quality.**

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GEORGE W. YORK, Editor | CHICAGO, ILL., DECEMBER, 1907 | Vol. XLVII—No. 32

Merry Christmas—Happy New Year

These are our wishes for all the readers of the old American Bee Journal when the approaching Holiday Season arrives. And that the fullest fruition of your highest hopes may be attained in 1908 is our further wish for you all.

Report on Bees and Honey for 1907

On page 764 will be found a report blank which we wish every one of our readers would fill out at once and mail to the office of the American Bee Journal, 118 W. Jackson, Blvd., Chicago, Ill. Then in the January number we expect to give a summarized statement for the benefit of all. We believe that a report made up of all the individual reports sent in, would be very interesting and helpful.

We do not expect to publish any names, so don't be afraid to give true and correct answers to the questions asked. The information as given by individuals will not go outside of this office and will be known only to the Editor. Only a summarized report will be given out or published.

If a satisfactory number of our readers will take hold of this effort we believe the result can be made of untold value to every bee-keeper who produces honey for the market. It may result in quarterly reports later on, which can be used to fix the right price on honey, beeswax, etc. We believe that if all who are interested in getting worthwhile returns from their bee-keeping, will help in this effort that we are now starting for the benefit of all, they will not regret it, but will be pleased with the information that may be secured for their guidance in the sale of honey.

At any rate, let us see what can be done now toward getting an idea as to the amount of honey produced the past season by the readers of the American Bee Journal; the condition of the bees this fall; and as to the clover and other honey-plant prospects for 1908.

If you do not wish to cut this number of the American Bee Journal, just copy the questions on any sheet of paper, answer them, and then mail to us as directed in the first paragraph.

Feeding Bees for Winter in Canada

The divergent views of writers on bee-culture is a source of perplexity to the beginner. A notable instance of this divergence of views occurs in the Canadian Bee Journal for October. F. P. Adams, speaking of the harm done by late disturbance, says:

"The only safe way to overcome this difficulty is to prepare for winter before the cool weather sets in, and our most successful apiarists recognize this fact by commencing their winter preparations at the close of the honey harvest. It is true that at this time the hives usually contain a lot of brood, but it is surprising what a quantity of syrup can be forced into the brood-nests by heavy feeding."

J. L. Byer says this: "While there is more danger of feeding too late rather than too early, experience has taught me that, for various reasons, it is not wise to do much feeding previous to September 20."

Then comes Editor Hurley, saying: "Mr. Byer, in his notes appearing in this issue, urges feeding in September. In our experience this would not be satisfactory. We prefer to feed when the last batch of brood has hatched. Wintering bees on empty brood-frames is dangerous."

Of Mr. Adams the editor says: "The pronounced success that he has had with his bees, makes anything he writes of great interest." Mr. Byer has for years conducted a department in the Canadian Bee Journel in a very able manner, and Editor Hurley may well be supposed to know something on the subject. After reading these three varying views from three authorities, and all under the same cover, is it any wonder the beginner should feel somewhat dizzy?

Specialty Not Best for Every One

As is well known, Editor Hutchinson had adopted for his slogan the cry, "Keep more bees!" and from the vigorous manner in which he has kept up the cry it is not strange if he has been understood by some as advocating an indiscriminate launching into the business on a wholesale scale by all and sundry. The following from The Bee-Keepers' Review, will show that such a view is erroneous:

"While the Review believes in and advocates specialty, it recognizes the fact that not every bee-keeper is in position to take advantage of it. To illustrate: A letter was recently received that read something as follows:

'You write so convincingly of specialty that I am sometimes almost tempted to adopt it, but I have a family of 5 children to support, and I dare not take the risk of abandoning my regular occupation for that of bee-keeping as my sole occupation. At present I have only 12 colonies.'

"This man would be the last one that the Review would advise to engage in bee-keeping as specialty. It would be almost as sensible to advise him to engage in the practice of medicine. A man whose experience is limited to what he has acquired in a year or two with only 12 colonies of bees is in no position to go into the business as a specialist. Bee-keeping is a profession that must be learned, the same as any other, before it can be followed extensively and exclusively. The men whom I advise to make of bee-keeping an exclusive business are those who

American Bee Journal

have learned it from A to Z, but continue, year after year, to fuss along with a single apiary of 75 or 100 colonies, lacking the confidence, or the 'nerve,' to drop some other business that is holding them back, and double their profits by enlarging their bee-business to the extent of their abilities."

Where to Put a Caged Queen

Some practise caging a laying queen for a time in the hive, so that no eggs shall be laid while she is thus caged. Little or nothing has ever been said as to any difference resulting from caging the queen in different parts of the hive, but according to G. M. Doolittle it makes a very material difference where she is caged. He says in Gleanings: "I find that, when she is at this point, the bees as a rule work right along the same, or nearly so, as they would if the queen had her liberty. In other words, when I cage a queen and put the cage near the top of the brood-chamber the bees seem to feel as if they were queenless, start queen-cells at once, or as soon as they would if the queen were taken from the hive, and lack in energy about working, very much the same as a queenless colony does. But cage her near the entrance, at the bottom of the hive, and work goes right along, often without any queen-cells being started at all."

The Two-Queen Plan

In Gleanings for Nov. 15, a good deal is said about having more than one queen in a hive, but the talk seems to be almost altogether about queens separated by excluder zinc. This seems a great disappointment to those who had hoped that, like E. W. Alexander, they could have two or more queens peacefully working side by side with no sort of separation. If queens must be kept apart, two in a hive will be little if any better than the Wells plan, about which so much was said a few years ago, especially in England, but about which almost nothing is said at the present time. In the Wells plan, the two colonies are separated by a perforated wooden partition.

One man reports that he can keep a young queen in the same hive with one or more old queens, but the attempt to keep more than one young queen in the same hive has always been a failure. How old a queen must be before she will dwell in peace with a younger queen is still an unsolved problem.

While we may still hope that good may come from the plan, there is no denying that the prospect does not look as bright as it did.

Study the Subject of Bee-Keeping

The editor of The Irish Bee Journal says:

"Our correspondence during the past few months shows that the number of bee-keepers who know little or nothing of their business, is not small, either here or in Great Britain. We strongly advise all such to devote some time to study during the winter months. A good guide, a volume or two of a reliable bee-periodical, will well repay the cost if carefully read. Naturally we recommend the 'Irish Bee Guide,' and the Irish Bee Journal for the purpose, not only because we believe in them ourselves, but also because hundreds of experienced bee-keepers have testified that the two publications named are hard to beat. Whatever the book or the paper to be selected, we think it safe to say that any bee-keeper who is not sufficiently interested in the subject to read it up, would be wiser to go out of the business altogether."

To all of which we give a hearty "Amen," even to endorsing the book and periodical mentioned, and also making application of the general sentiment to American bee-keepers; and would especially commend a careful reading of the last sentence of the clipping by any one who is yet without *both* a book and a paper about bees. Of course "in this locality," the American Bee Journal is supposed to be an excellent publication, but if you think you can find something better you have our gracious permission so to do; only be sure to get *some* book and *some* paper, and spend some time during the winter in reading up so as to be an intelligent bee-keeper, if you are not already in that class.

Reading Bee-Literature

The time for reading up on bee-literature will soon be here. What with the bee-papers and many good bee-books, there is no reasonable excuse for everybody, who desires, not knowing a great deal about bees and their cure—theoretically, at least.

The advice is given, that of the two—the bee-papers and bee-books—the book is the first that should be read by the beginner, and that is good advice, too. Of course, *we* say, get *both* book and paper. For $1.50 or $1.75 the very best bee-book can be had with the American Bee Journal a whole year. Surely it must be a very small business that would not warrant an outlay of less than $2.00 for the best obtainable information concerning it.

In these days of strenuous competition, a man or woman needs to know all that it is possible to know about any business in which he or she embarks. And so one must invest in some good literature relating to the work which he expects to do.

Parcels Post in the United States

Just now there is a revival of interest in this matter from the fact that the Post Master General is championing a movement in the direction of greater facilities for sending through the mail articles of merchandise. Americans are somewhat given to consider themselves as in the van of progress, but so far as cheap carriage through the mails is concerned, or indeed so far as its carriage in any way in small parcels is concerned, they are sadly in the rear.

Is there not something wrong with post-office regulations that allow a package to be sent to Germany for less money than required to take it 5 miles to the next post-office? In the British Bee Journal, W. J. Farmer reports what he considers a postal curiosity, owing to regulations on this side. He mailed 3 pounds of honey at his local post-office to be sent to America, paying 50 cents thereon as postage. A few days later he received notice from the postmaster at Liverpool, saying that although the package might be sent to any part of Great Britain, honey was not allowed in the mail to the U. S., but if he would send 75 cents more the package would be sent by a semi-official company. He promptly sent the additional 75 cents, and was surprised a few days later to have it returned to him with the information that the 3 pounds of honey would be sent for the 50 cents paid at the beginning, because they had discovered that it was comb honey and not extracted honey put up in a tin can!

The Post-Master General has the best wishes of the people, but whether he can accomplish anything is somewhat problematical so long as the U. S. Senate is controlled by the express companies rather than by the people.

An Invitation to Readers

As the time of longer evenings is again arriving, we would like to invite our readers to send in their reports of the season of 1907 with the bees.

It may be, also, that some have been trying experiments, or have had some things to develop that would be of interest to all. If so, we would like to have such write out their experiences for publication, and send them in. No doubt what you have read in the American Bee Journal has been a great help to you, so why not *you* add your mite to the general fund of information about bees?

It may often happen that your way of doing things may seem very simple to you and of not sufficient importance to describe in print. And yet, such may be of great interest and help to others. Why not let us have it for the columns of the old American Bee Journal?

World's Pure Food Show

This great exposition opened Nov. 16 and continued up to and including the 23d. As previously announced the National Bee-Keepers' Association had an exhibit of honey which was in charge of General Manager France. It was a most excellent display, containing honey from some 15 States and 5 foreign countries, all arranged in artistic form. It was a great attraction, and should help to popularize the use of honey, as there were visitors from all over this country.

We expect to have more to say about it next month, as the show is still in operation while we are writing this item.

The Illinois State Convention

This was held in Springfield, Ill., Nov. 19 and 20. The attendance was fully as large as in any year for some time. We had the pleasure of attending also. It was a good meeting. The report will be published in pamphlet form and mailed to the members. One of the

American Bee Journal

most important subjects discussed was that of securing for Illinois a foul-brood law similar to that of Wisconsin.

The election of officers for the ensuing year resulted as follows: President, J. Q. Smith, of Lincoln, 1st Vice-Pres., G. W. Cave, of Kirkwood; 2d, W. H. Hyde, of New Canton; 3d, A. L. Kildow, of Putnam; 4th, S. N. Black, of Clayton; and 5th, C. P. Dadant, of Hamilton. Secretary, Jas. A. Stone, Rt. 4, Springfield. Treasurer, Chas. Becker, Pleasant Plains.

We are told that the Illinois Bee-Keepers' Association is the largest of all the State bee-keepers' organizations. Illinois also has the largest number of members of any State in the National Association. But the memberships in both organizations should be greatly increased in Illinois. The annual dues of $1.00 will pay for one year in both the State and the National. Send the dollar to the Secretary Jas. A. Stone, Rt. 4, Springfield, Ill., and he will forward one-half the amount to the National. You will then receive a receipt from both associations. Of course this is meant for our Illinois readers. We wish that every bee-keeper in the State were a member of the two organizations. It is a good time to join if not now a member.

Naturally, being located in Illinois, we have considerable pride in seeing this State lead; and yet we would rejoice to see every State advance all along the line in everything apiarian.

Index for 1907

In this number appears the annual index for 1907. It shows what a great variety of topics have been considered during only one short year, in the American Bee Journal. To all who have preserved their copies as received, the index will be of great value for reference. It is a very complete index, as will be found on examination.

Canadian Bee Journal Changes

With the October number of the Canadian Bee Journal, now in its 15th year, come some notable changes. It has been sold to James J. Hurley, of the Hurley Printing Co., a practical printer and enthusiastic keeper of bees, a combination which ought to fit him out well as editor and publisher. The publication has no longer any connection with the bee-supply business, and has been increased to 40 pages. Success to it and its new editor.

An Old Apiary in California

The apiary shown on first page was established originally in 1865 by A. D. Pryal, as mentioned elsewhere in this issue. It is located at the base of the hills near the southern boundary line of the city of Berkeley, Calif., and lies directly opposite San Francisco. It was never conducted as a large commercial apiary, as is so often the case in that State; rather it has been a home bee-yard, furnishing delicious honey for a large family. In years of a good honey-flow the surplus has been disposed of at a fair profit, thus augmenting the proceeds of the place, which has been mainly run as an orchard and small fruit ranch.

In 1876, Mr. Pryal turned the apiary over to his son, William A., who has continued to care for it ever since. None of the original hives are in use, though some portions of them have been utilized in the construction of some of the hives shown in the half-tone.

As may be noted, the photograph was made in the winter, and shows the way bees are usually wintered in California. Sometimes the supers are removed at the approach of winter; at other times they are not. It is found that with good, strong colonies it is easier and cheaper to protect the combs from moth-worms, etc., by leaving them on the hives, rather than by removing them and storing them in the honey-house, or other place.

The trees shown are cherry, English walnut, apricot and oranges, the latter being the dark masses in the middle at the right.

Japanese Bees

In l'Apiculture Nouvelle, is given an account of Japanese bees. They are much like Italians, although a little smaller. Only a single colony had been seen by the correspondent, but that showed a very peculiar trait. The entrance guards acted also as ventilators, *with their heads toward the entrance.* Was that a freak performance of the occasion, or is it the rule with bees of Japan?

Uncapping-Fork

For uncapping purposes there has been in use in Europe for some time an implement that has been so highly praised that one has wondered why such a good thing has not been introduced into this country. In appearance it reminds one just a little of the clippers used to shear horses, or the smaller clippers used by barbers, if one may judge from the illustrations. An article by C. P. Dadant in l'Apiculture Nouvelle, gives good evidence that he has given the implement a pretty thorough trial, and one who reads the article is hardly likely to care for any further trial. To mention no others, one objection is that instead of making a clean cutting of the cappings, there is little more than a

scratching, leaving the cappings partly attached to the comb, to be thrown away by the bees, some of the small particles of wax clogging the screen of the extractor, or falling in the honey—a real loss of value in wax.

But perhaps others have found the uncapping-fork shown herewith to be of value to them.

Bee-Keeping in Australia and Here

Upon reading reports from Australia, some have cast longing looks in that direction. That some longing looks are directed in the opposite direction is shown by the following wail in the Australian Bee Bulletin:

"Would not it be nice if Australian bee-keepers had the beautiful clover-fields of Great Britain and North America, suitable for grazing as well as bee-keeping? When the honey-trees are cleared away to make wheat-fields, good-by to bees."

Bees Attack Passengers

Mr. H. W. Gander, of Pennsylvania, clipped the following "special" from the Philadelphia Record of Nov. 7:

"A swarm of bees escaped from a hive that was being loaded on a train at Tyrone to-day, and attempted to settle on the waiting passengers, causing a panic and a dash for cover.

"The bees then tried to get in the train in a body; but the passengers quickly closed the windows, while the trainmen, with overcoats over their heads, kept many of them away from the doors.

"A number of persons were stung, and the swarm was later captured and sent west."

"The Golden Bee"—Wonderful!

Hon. Eugene Secor, of Forest City, Iowa, sends us the following regarding a newspaper clipping which he also enclosed, the clipping being dated Oct. 18, 1907, and taken from the Iowa State Register and Farmer:

DEAR MR. YORK:—Am I so far behind the times that I haven't heard of the "Golden bee" and its propagation—or evolution—as described in the enclosed clipping from the Iowa State Register and Farmer?" I must confess that I haven't read of this $25 to $100 bee.

I'm not criticising the editor, who is a good friend of mine, but just wondering where the wonder is advertised. That's just the bee I should have had this year—one that would have given me 185 pounds of honey, regardless of the weather! I want her bad. I've a

American Bee Journal

notion to advertise in your "want" column.

Yours in need of honey,

EUGENE SECOR.

The clipping referred to reads thus:

"THE GOLDEN BEE."

"A subscriber from Story county writes: 'I have been reading about the golden honey-bee, and I have been trying to know more about it.' Will you give through the columns of the Register and Farmer some information of this variety of honey-bee?'

"The golden bee was evolved from the Italian bee, which was the lightest of any in coloring. A number were imported to this country some years ago and the experiment of producing the really golden creature was begun. The Italian bees were kept apart from others and a careful process of selection was inaugurated. Careful watch was kept, and when the queens were born the lightest-colored one was isolated. She was then introduced into a hive, from which she was sent out to mate. When she returned and began laying eggs the vigil was all the more closely kept. Day after day the bees were visited, and when the young queens emerged from their cells the lightest colored was often selected and isolated.

"This process was repeated over and over again during a summer, and then for summer after summer years went on and the experimenting apiculturist saw his bees losing the leathery bands which encircled them, and assuming a lighter color.

"The golden bee is actually golden and is one of the rarest of bees, and it is as gentle as it is beautiful. So rarely does it sting that it has been called the 'non-stinging bee.' It may be handled almost with impunity. Furthermore, it is an amazing producer of honey, one hive having collected annually about 185 pounds of the golden sweet. As to the value of the queen, they sell at prices ranging from $25 to $100 apiece."

This is truly wonderful! And to think that bee-keepers didn't know about it in time to get 185 pounds per colony the past poor honey season! Well, there are more seasons coming so there will be time yet to invest "$25 to $100 apiece" for a few queens that turn out the golden bees that produce the gold through their honey!

"Langstroth on the Honey-Bee"

One of our readers wrote us as follows recently about this bee-book, originally written by Rev. L. L. Langstroth, the Father of American bee-keeping:

EDITOR YORK:—The book, "Langstroth on the Honey-Bee," which you sent me, arrived all O. K., and after reading it over I must say I am exceedingly well pleased with it. I could not, had I been there, with all the books before me, suited myself better. The book is so interestingly written, and the instructions are so plain, that one as little versed in bee-culture as I, can not help but understand. And with what a difference I now read the bee-papers, for I now understand what they are talking about.

Is it not wonderful, how Mr. C. P. Dadant quotes from old writers, what they say on certain subjects, and then what Mr. Dadant has seen, all brought down so nicely? I don't see how a better book for the beginner could be written.

Now allow me to thank you cordially for the interest you have shown.

T. T. ARMSTRONG.

Hiawatha, Kans., Nov. 20.

The book referred to by Mr. Armstrong certainly is a valuable one. It contains over 500 pages, and was revised this very year, so it is fully up-to-date. We mail it for $1.20, or with the American Bee Journal one year—both for only $1.45. No mistake will be made by any one who gets this book.

Wedding Bells in Missouri

Oct. 31, 1907, Mr. John C. Stewart, of Hopkins, Mo., and Mrs. Henrietta Larch (widow of the late Dr. Larch, of Savannah, Mo.) were married. Mrs. Larch was a popular lady where she lived, and owned a 160-acre farm, on which is a $500 bee-house, excellent orchard, etc. Mr. Stewart is one of Missouri's best-known bee-keepers. Our congratulations are hereby extended to the happy couple.

The Chicago-Northwestern Convention

By the time this copy of the American Bee Journal is in the hands of its readers another annual convention of the Chicago-Northwestern will have been held. At this time (Nov. 23) the prospects are for a splendid meeting. We hope it may be such. Next month we hope to be able to give a good report of it in these columns.

The Michigan Convention

The Michigan Bee-Keepers' Association will hold its annual meeting at Saginaw, the first session being on Wednesday evening, Dec. 18 and the last one on Friday afternoon the 20th.

Headquarters will be at the Sherman House, at which the special rate of $1.50 per day has been secured.

Among the speakers will be R. F. Holtermann, of Brantford, Ont.; L. A. Aspinwall, of Jackson, Mich.; E. D. Townsend, Remus, Mich.; W. J. Manley, Sandusky, Mich.; and W. Z. Hutchinson, of Flint, Mich.

An exhibit of honey and wax will be made, and premiums are as follows:

Best single section of comb honey—one Advance Bee-Veil.

Best 6 sections of comb honey—500 Lewis sections.

Best 5 pounds of beeswax—one Hilton hive.

Best 5 pounds of extracted honey—Choice of one year's subscription to the Bee-Keepers' Review, or a copy of "Advanced Bee Culture."

Best suggestions or plan offered to increase the membership to Association. Same to be in writing and not more than 150 words—one copy de luxe edition of the "A B C of Bee Culture."

For further information, write to the Secretary, Elmore M. Hunt, of Redford, Mich.

Tennessee Fair Apiarian Premiums

The Tennessee State Fair held the last week in September at Nashville, was a decided success, in every respect, and was universally pronounced the greatest Fair ever held in the South.

In the Apiary Department there were some fine displays of comb and extracted honey, wax, bees, implements, etc. Mr. Leslie Martin gave a daily live-bee demonstration in a wire cage, and this feature attracted a great deal of attention, as it was something new here. The following awards were made:

Best 10 pounds extracted honey—1st, J. M. Davis, of Spring Hill; 2d, J. M. Buchanan, of Franklin; 3d, Chip Henderson, of Murfreesboro.

Display of extracted honey—1st, J. M. Davis.

Best case of comb honey—1st, J. M. Buchanan; 2d, E. B. Buchanan, of Franklin; 3d, Ira Moore, of Nashville.

Display of comb honey—1st, J. M. Buchanan.

Display of beeswax—1st, J. M. Buchanan; 2d, Mrs. W. M. Joseph, of Nashville.

Nucleus of dark Italian bees—1st, J. M. Davis; 2d, J. M. Buchanan; 3d, Leslie Martin, of Lebanon.

Nucleus of golden Italian bees—1st, J. M. Davis; 2d, Mrs. W. M. Joseph.

Nucleus of Caucasian bees—1st, Leslie Martin; 2d, J. M. Davis; 3d, J. M. Buchanan.

Nucleus of Carniolan bees—1st, J. M. Davis.

Best display of bees, bee-products, implements, etc.—1st, J. M. Davis; 2d, J. M. Buchanan; 3d, Mrs. W. M. Joseph.

Mr. Fred W. Muth, of Cincinnati, was the Judge in this department.

J. M. BUCHANAN, *Supt.*

"Gus Dittmer Company"

Beginning with Nov. 29, 1907, the business conducted for so many years by Gus Dittmer, of Augusta, Wis., will be run under the name of "Gus Dittmer Company," which was recently incorporated under the laws of Wisconsin, with a capital stock of $20,000. Gus Dittmer is the president and treasurer; Mrs. Jennie Dittmer, vice-president; and Fred M. Dittmer, secretary. This is a wise move, and we trust that the Gus Dittmer Company may continue to be even more successful than was its predecessor.

Result of the National Election

The following were elected last month as officers and directors of the National Bee-Keepers' Association:

President—Geo. E. Hilton, Fremont, Mich.

Vice-President—George W. York, Chicago, Ill.

Secretary—W. Z. Hutchinson, Flint, Mich.

General Manager and Treasurer—N. E. France, Platteville, Wis.

Directors—(in place of three expiring)—Wm. McEvoy, Woodburn, Ont.; E. W. Alexander, Delanson, N. Y.; and R. C. Aikin, Loveland, Colo.

American Bee Journal

Conducted by J. L. BYER, Mount Joy, Ont.

Report of the Ontario Convention.

The Ontario Bee-Keepers' Association met according to program, in Toronto, on Nov. 13, 14, and 15, 1907. Despite the fact of the bee-keepers having passed through a poor season, the attendance was good, and intense interest was manifested throughout the different sessions.

The Vice-President's Address.

In the absence of Pres. R. H. Smith, Vice-Pres. Miller occupied the chair. Mr. Miller makes a good presiding officer, and during the different meetings conducted the proceedings with tact and courtesy, to the satisfaction of all present. In his address he referred to the short crops, but thought that the present high prices would in a measure make up the deficit. Specialist bee-keepers should look upon their calling as a dignified one, and should aim to place the business upon a higher level.

He referred to the fact that the Minister of Agriculture for Ontario—Hon. Nelson Monteith—was ever ready to help along towards this desired end, and that as bee-keepers, we owed his Department a debt of gratitude for help already received.

The new system of having 6 inspectors instead of one, he believed to have been entirely satisfactory, and the closer union of the Association with the Department of Agriculture, by having Mr. Hodgetts of the Department, as Secretary of the Association, had proved to be a decided advantage to all concerned.

As regards the prospects for the future of bee-keeping, the speaker regarded them as being very bright. The population of Canada, particularly in the West, was increasing at an enormous rate, and for some years at least we would not need an export market, as the home trade would take all the honey we could produce.

Mr. Couse, in the discussion that followed the President's address, endorsed all that had been said, and referred to the fact that better honey was being produced than was the case some years ago; in fact, "no better honey was produced in the world than the product of Ontario apiaries." This desirable state of affairs had largely been brought about by the good work of the Ontario Bee-Keepers' Association. The honey industry is a profitable one in many ways, as the success of the clover, fruit-growing, and other industries were largely dependent upon the bees.

Distribution of Honey.

W. A. Chrysler, of Chatham, read a paper on "Distribution of Honey." The speaker had lately arrived home from a trip through the Northwest, and from observations there, relative to the honey market, he was more than ever convinced of the advantages of co-operation among bee-keepers for the handling of their product. Mr. Chrysler lives in a locality where co-operation has lifted the fruit-growing industry out of the rut and placed it on a highly profitable basis and it is only natural that he should be an enthusiast on this system of marketing. While nearly all were in favor of the idea, yet some thought that it was not likely that much would be done along that line as long as the production was limited, and prices as high as at present. In other words, history would repeat itself, and, like the fruit-growers, dairy-men, and others, the bee-keepers would not be actively concerned about co-operation until actually forced as a matter of protection to do so. However, a committee was appointed to look into the subject and report at the next annual meeting.

The President thought it good policy to send some honey to the Western Province even in poor years, in order to hold the trade for years when there was more honey to be disposed of. This year, although all the honey produced could have been disposed of easily in Ontario, yet the Middlesex County Association had shipped part of their crop West, with good returns.

Price of Good Honey.

At this stage of the meeting a discussion arose as to what good honey should be sold for. The view entertained by some that extracted honey should retail for 15 cents, was in the judgment of some members a little too high in years of good crops, as there was a danger of foreign honey being shipped in. Even this year, in the early part of the season, an offer was made from Colorado to lay down alfalfa honey in Toronto at 10½ cents; and honey from Jamaica, for manufacturing purposes, was offered at a surprisingly low figure. It was thought easier to keep foreign honey out than to oust it after having once gained admission to our markets.

Mr. Storer, of Lindsey, who had lately returned from Scotland, spoke of seeing 1200 acres of raspberries near one small town, and the entire product was sold under the co-operative system to the complete satisfaction of the growers.

Mr. Hodgetts, Secretary of the Ontario Bee-Keepers' Association, at the invitation of the President, also spoke along the lines of co-operation. From his connection with the fruit-growers' association he had intimate knowledge of its workings, and he had no hesitation in saying that the system had been a huge success with the members of that body. While the bee-keepers of Ontario might not be ripe for co-operation, yet he saw no reasons why it would not work out satisfactorily if given a trial.

The Honey Exchange Committee came in for a good deal of praise for the good work done, the only difference of opinion among members present being that some thought the report should be sent out earlier than was the case last year. It was pointed out that the reports covered a large territory, and, all things considered, it was hardly possible to get out a fairly accurate estimate of crop conditions much earlier than has been the case in past years.

Requeening Colonies.

In answer to the question, "When shall we requeen?" Mr. McEvoy said more requeening should be done; that some queens were good at 4 and 5 years old is no argument against the advisability of requeening. Some horses are good at 17 years, but more at 7; some men at 70, but more at 17. The same principle applied to queens.

Mr. Holtermann wished to refute the idea that a queen lays a given number of eggs and then dies; that the principle is contrary to all animal nature, poor wintering and other causes largely determining how long a queen shall be prolific.

Mr. Dickensen would requeen every 2 years, but the majority of the members would prefer to requeen whenever a poor queen was noticed, rather than practise a wholesale method, perhaps often destroying some better queens than their successors would prove to be.

Wax-Presses.

Relative to a question on wax-presses, those who had tried the Hershiser admitted that while more wax could be obtained, yet the quality was not so good as that taken with the Hatch-Gemmill press. Later on during the convention, Mr. Sibbald by means of a model, explained the workings of a press (one member called it a cross between the Gemmill and Hershiser presses) which he thought superior to either the Hatch-Gemmill or Hershiser. (Cuts of this press with Mr. Sibbald's explanations will appear in the printed annual report of the convention.)

Foul-Brood.

Miss Trevorrow, of Meadowvale, read a paper on "Foul Brood." She had no practical knowledge of the disease, and her paper (an admirable one) was largely along the lines of prevention rather than cure. Carefulness and neatness in the apiary was touched upon as well as the necessity of using the wax-press freely to melt up all old combs. The inspectors had many difficulties beyond their control to contend with, and it was decidedly necessary that bee-keepers should heartily co-operate with the inspectors if the dread disease is to be eradicated.

American Bee Journal

Miss Trevorrow is a highly successful bee-keeper, and is thoroughly informed in all lines of the pursuit. A hearty vote of thanks was accorded her for the excellent paper presented.

EXTRACTED HONEY PRODUCTION.

To the disappointment of all present, Mr. Alexander, owing to ill health, was not able to attend the convention. However, a paper prepared by him was read by Mr. Sibbald. Mr. Alexander recommended the radical course of extracting the honey from the brood-nest and feeding back, during the early part of the honey-flow. A great difference of opinion was expressed in the discussion that followed, and while a few endorsed the idea, the majority would not practise it. All were agreed that it was advisable to get as much brood as possible in the brood-nest previous to the honey-flow, yet the work and risk involved in Mr. Alexander's system was thought to be too great.

In connection with Mr. Alexander's present position of stripping the brood-nest of practically all the honey, it is interesting to compare the stand taken by him a little over a year ago on this question. In answer to a questioner as to how to avoid having light colonies in the fall, Mr. Alexander stated in Gleanings, Jan. 1, 1906 issue, that they formerly had this trouble to contend with, and he gave the following advice:

"In order to avoid light colonies in the fall, let your bees fill up their hives with the first honey of the season, and see that they have plenty of it capped over before you put on your extracting supers."

His present position makes it clear that he wants little honey in the brood-nest, and it is hard to understand what he really meant in the quotation I have given. Certainly in the majority of localities, if his advice were followed, vast apiaries would be badly demoralized by swarming, if supering were delayed so long.

COMB-HONEY PRODUCTION.

Mr. S. D. House, of New York, gave what was conceded by all to be one of the best addresses ever listened to by the Association. His talk was much on the same lines as at Brantford last year, and was business from start to finish. His methods of using the divisible brood-chamber in the production of comb honey (the theme of his address) were explained in a very lucid way to the delight of all present, and at least a few members were "almost persuaded" to adopt a hive along the lines of the one used by Mr. House.

FOUL BROOD AND BLACK BROOD.

The 6 inspectors of apiaries gave their reports, and out of some 400 apiaries visited, about 50 percent were found to be diseased. Of course, this represents apiaries where disease was suspected, and the percentage of diseased colonies throughout the Province is by no means as large as the figures would indicate. Some black brood was discovered, and those who had had experience with it dreaded the disease more than the ordinary foul brood.

Resolutions were passed asking that Quebec Province enact a foul brood law, and that the management of the different fairs at Toronto, London, Ottawa, and other cities, give demonstrations in methods of bee-keeping and honey-production, descriptions and illustrations of the natural history of the bee, etc.

The following officers were elected for the ensuing year: President, F. J. Miller, of London, Ont.; Vice-President, W. Couse, of Streetsville; Secretary, P. W. Hodgetts, Parliament Bldg., Toronto; Treasurer, Martin Emigh, of Holbrook, Ont.

The next place of meeting is Toronto.

Conducted by EMMA M. WILSON, Marengo, Ill.

When to Cellar the Bees.

The time to take bees into the cellar is always a catchy problem. Last year ours were taken in Nov. 19th. But they had no good flight after the 10th, and it would have been much better if they had been carried in *then*, as 9 days of confinement outside in freezing weather with no chance to fly afterward is perhaps harder on them than three times as long in the cellar. If they could have had a flight by staying out a week or two longer, it would have been better to have left them out. But how can one tell in advance? As a matter of fact, there was no weather warm enough for further flight, so it was well they were not left out later.

This year, again, bees flew pretty well up to November 10, and then came cold weather, the thermometer going down once as low as 11 degrees above zero. A week of this weather made us quite uneasy, and it was a question whether it were better to run any further risk, or to take the bees in without waiting for another flight. Fortunately, just about the time we had nearly decided to take them in, the weather-man was obliging enough to send us a brand of weather to make our hearts glad. Nov. 18 the thermometer went up to 53 degrees, and the bees had a glorious flight. That was yesterday, and they would have gone in today only it's too warm; but the first day that it is cold enough, in they go.

Feeding Bees through a Sponge.

The following is given by Mary E. Akers, in Gleanings in Bee Culture:

"When bees are confined in a cage or box the under side of which is of wire-cloth, they can be fed (as some have already suggested) with honey as long as their tongues can reach it. My way is to fill the receptacle with syrup; press a sponge down in it, and all the syrup will be appropriated—you would be surprised to see in how short a time, as the sponge presses against the wire, and the weight of the bee-box of whatever kind holds it down. It works finely."

Now, isn't that bright? And a woman at that. But why confine that kind of a feeder to bees confined in a box? If a sponge sucked out at the top will empty feed out of a dish in which it is placed, the device may be used for feeding bees not confined, and the feeder may be placed in a hive or out in the open.

Take a box of convenient size and have a cover of wire-cloth that may be fastened on. Put in the box a dish to hold the feed, the dish being nearly or quite as deep as the inside of the box. Put in the feed a sponge of such size that when filled it will be deeper than the dish, but will be kept down in place when the wire cloth cover is fastened down. Now, why wouldn't that make a good feeder?

Confection of Tomatoes and Honey

Boil the tomatoes and pass them through a fine sieve. Add twice the weight of honey, skim well, and when the confection is almost done, add lemon.

Section-Honey in a Bee-Tree—Honey One Bee Gathers in Its Lifetime.

DEAR MISS WILSON:—I've just received and read the last American Bee Journal (No. 30), which in many ways is of especial interest to me. Those two women—one in England and one in Africa—who had swarms alight on their heads were pretty brave, and had their nerves under remarkable control. They were certainly in great danger of death connected with frightful suffering.

You may be interested in hearing about a novel sort of a bee-hive that the poet, Mr. Dodge, has on his place at Morristown, N. J. A swarm some years since made their home in the hollow trunk of a beautiful old tree near the house, and the bees have remained there and thrived to the great enjoyment of the Dodges, who, in the early days of their sojourn, fed them sugar generously, as one inducement to permanent occupancy. The first year there was no surplus honey obtained, but the

American Bee Journal

next spring our poet had a doorway cut in the tree *above* their brood and storage. Through this he inserted some pound section frames or boxes, and the bees filled them with honey. Every year since, the bees in this way have kept the family supplied with a very fine grade of comb honey. This is a true story, and well authenticated.

Mr. Dodge is much interested in bees, and reads very widely about their ways. He has somewhere found, as he believes, the reliable statement that a bee furnishes in its lifetime just one single tablespoonful of honey. In other words, the limit of the life-work of a bee is a tablespoonful of honey.

I, myself, do not quite see how these figures are reached. There is such a difference in localities and in seasons as to the honey crops, and also such a difference in bees, that it seems as if accuracy in averaging up would be an extremely difficult task.

I would greatly enjoy hearing from you on this subject.

FRANCES E. WHEELER.

Chazy, N. Y.

There is nothing new about bees having a home in a tree. Plenty of people have had bees in trees, and they are not poets, either. But this is probably the first case on record where section-boxes were given to bees in a tree, and the idea seems as poetical as novel.

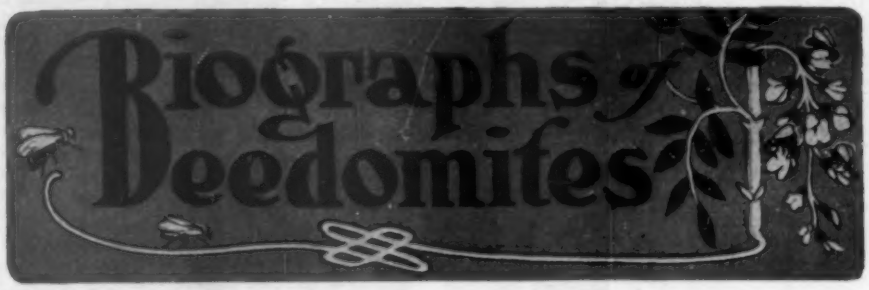
You are right that it would be an extremely difficult task to make anything like an accurate estimate of the amount of honey that may be considered the life-work of a bee to gather, there are such varying factors in the problem. Take a bee that is born so late in the season that all gathering ceases just as it becomes old enough to be a fielder, although it has spent its 16 days at work in the hive. The next spring it commences at housework again, using the honey stored by other bees for its own use and to feed the babies, and it may never gather any.

But the problem is an interesting one, and there may be no harm in taking average conditions and doing some little figuring to see whether there is justification for a spoonful to a bee. As most of the data we have with regard to the storing of honey are in pounds and ounces, the first thing is to know the weight of a tablespoonful of honey. If honey is thick enough, half a pound or more may be lifted at once with a spoon, but what is meant is probably an even, not a heaping, tablespoonful. To obtain this a half-pound of honey in a bowl was put into a small kettle of water and set over the fire until the honey became nearly as thin as water. Then it was measured with an ordinary tablespoon, and there were just 12 spoonfuls, or 24 spoonfuls to the pound. It's worth something to know that, isn't it? That makes a spoonful 2-3 of an ounce.

Take a good colony in a good season and suppose it stores 100 pounds of surplus. The amount of honey it will consume for its own use in the course of a year is variously estimated at 100 to 200 pounds, the higher figure being probably nearer the mark. Let us call it 200, and adding the surplus of 100 pounds to it we have 300 pounds as the year's gathering. If there are 24 spoonfuls to the pound, and if each bee gathers a spoonful, then it will take 24 bees to gather a pound, and to gather 300 pounds will take 300 times 24, or 7,200 bees. But we know well that in a colony strong enough to lay up a surplus of 100 pounds there will be many more than 7,200 fielders in the hive at one time, to say nothing of several generations of them. Evidently a spoonful to a bee is an overestimate.

Let us approach the problem from another direction: A strong colony will gather all the way from nothing up to 5, 10, and in extreme cases 20 pounds a day. It is perhaps not far out of the way to say that a very good day's work for a colony strong enough to have 30,000 fielders is 5 pounds. The life of a bee in the working season is about 6 weeks, or 42 days. The first 16 days it spends in the hive, leaving 26 days for field-work. If 5 pounds is a day's work for 30,000 bees, in their life-work of 26 days, they would gather 130 pounds, or 2080 ounces. Divide that 2080 ounces among 30,000 bees, and it gives over 1-15 of an ounce, or 1-10 of a spoonful for each bee. That is likely more than the average, although many a bee probably exceeds it.

Even at that it's wonderful to think of anything like a tenth of a spoonful being gathered by each bee. Take a spoonful of honey and look at it, and think of its being gathered by 10 bees. Why, the whole 10 could drown in it, so each bee has gathered enough honey in which it might drown itself. And yet of late there has been some talk of bees being lazy! Anyway, if they do spend some time resting, they must make up for it when they are at work.



Glimpses of Southwestern Apiculture, and a Sketch of One of Its Leading Representatives—Louis H. Scholl

BY ARTHUR H. MCCRAY.

Three years ago the writer first met the subject of this sketch—Louis H. Scholl—at the Ohio State University. An acquaintance was formed, which, like many college acquaintances, was more abiding than simply during college life. After Mr. Scholl returned home from college at Columbus, Ohio, in the spring of 1905, a correspondence was kept up, and the writer grew more and more anxious to see the great State of Texas, with its people and vast extent of territory, some of which he certainly thought must be a bee-keepers' paradise.

At last a letter came with a message from the Sunny Southland, which was irresistible. Such phrases as, "20,000 pounds of honey and scarcely any yet taken off," "a month's vacation before going back to college will do you good," "I will give you a chance to see something of Texas," etc. Such alluring and tempting offers were irresistible, and the result was that the fall of 1906 found the writer enjoying Southern hospitality to the full. Frequent long drives to the dozen and more apiaries scattered here and there over the gently rolling slopes of Comal and adjoining counties will never be forgotten. The vast extent of mesquite (meeskeet) pasture, and the yellow expanse of broomweed, the acres and acres of cotton, with Mr. Scholl's enthusiastic remarks, were all-sufficient to make one for the time being an enthusiastic bee-keeper, and make him feel like going into large-scale bee-keeping himself, forgetting all about college duties, and plans for the future.

Upon learning that Scholl had resigned his position at college, and refused a $2,000 offer to go to East Africa, one can see without difficulty that here indeed is a man whose heart and soul are with Texas, and who believes in bee-keeping to the full extent, as a profession. One needs only to hear Scholl digress on bee-keeping and its pleasures to become enthused.

And so the writer believes that a few facts concerning this leader in the South, such as he was able to glean while there, will be of general interest, and perhaps contribute somewhat to giving "honor to whom honor is due."

The subject of this biographical sketch, while yet young in years, is old in experience, and certainly has left an enviable record behind him already, and a still more brilliant prospect for the future can but be his.

Born at Hunter, Tex., October 24, 1880, of German parents, and still residing in Texas and expressing confidence in the resources of the dear old Lone Star State above all others, our subject may well be considered one of her most loyal sons. It is said of poets that they are born, not made. The same can be said with equal truth, and without fear of contradiction, of scientists. And if the modern inquiring bee-keeper is not a scientist, who under the sun is? The conclusion follows.

Like Langstroth of old, our friend and devotee of the busy gleaners of the field, received no encouragement from his parents, but, in fact, almost every discouragement possible; and his bees,

American Bee Journal

which he had accumulated in his minority (some 60 colonies) he purchased to save them from other hands when he attained his majority. This is according to old German custom, that whatever earnings children may make before becoming of age belongs to the parents. He was told that bee-keeping was no occupation, and that he must take up some trade. Undaunted, young Scholl struck out for himself, and we behold the young adventurer seeking his fortune with determination away from the parental roof.

Mr. Scholl was about 21 years of age at this time, leaving October, 1901, and landing in Southwest Texas, where he made a thorough study of bee-keeping conditions in this bee-paradise. Here Scholl traveled in the interests of the Lone Star Apiaries and Lone Star Publishing Co., the "Lone Star Apiarist" being started in January, 1902, with Mr. Scholl as editor. In the meantime the position of managing apiarist for the Hyde Bee Co., had been accepted. This Company at that time owned 1150 colonies distributed in several counties.

Taking an active interest in Association work, Mr. Scholl, in 1899, was elected Secretary-Treasurer of the Texas Bee-Keepers' Association, and still holds the position. About this time he began to work for an experimental apiary, and was a member of a committee having this matter in charge, and was himself largely responsible for the appropriation which was made.

In May, 1902, our friend received a telegram summoning him to the Agricultural and Mechanical College, at College Station, Tex., for the purpose of establishing the above-mentioned experimental apiary, for which he had so diligently and earnestly worked. In the fall of the same year he was sent to Colorado to study bee-keeping conditions there, particular emphasis being laid on the investigation of foul brood. After remaining in Colorado for a month he returned and went again to Southwest Texas and the Coast region, to study bee-keeping conditions, and to work on collections for the entomological department of the college.

Mr. Scholl now came home and spent the winter enlarging his own private bee-business. At this time he was on the Legislative Committee which secured the foul brood law for Texas, and in the spring of 1903 he was appointed to the position of Apiarist and Assistant in the Department of Entomology at the Agricultural and Mechanical College at College Station. The work of carrying out the provisions of the foul brood law was in charge of the State Entomologist, and the work of foul brood inspection fell to the Apiarist. Mr. Scholl was always a believer in organization, and while here made special trips to talk organization as well as to do the work on regular foul-brood inspection trips. Several local bee-keepers' organizations were the direct outcome of these efforts.

While in the Department of Entomology a good part of the time was spent in studying the cotton-boll weevil, and experiments to determine some means of exterminating the pest were conducted. During the stay at College Station much Farmers' Institute work was performed by Scholl, and in 1904 he lectured to 42 audiences, the main topic, of course, being bee-keeping. Among the topics that of diversification of crops was also kept prominently in the foreground, bee-keeping always being brought in as one of the means of diversification.

While connected with the Department at College Station, Mr. Scholl was selected by a committee composed of College and Experimental Station officials, to fill a position under the German Government, which, becoming interested in growing cotton in its East African possessions, was searching for a trained man to assist them. This position was one of peculiar difficulties, and required a man who coud speak German; with a scientific training as well as versed in practical cotton-growing; and a considerable knowledge of economic entomology was also required. The position paid $3,000 per year, and Scholl seemed to be the only man available in the South, and was earnestly urged by his colleagues at College Station to accept the offer. After careful consideration Mr. Scholl felt it his bounden duty to refuse the offer in order that he might stay with the cause that he had espoused, viz., apiculture, saying that could he have taken Texas and his bees he would go—showing again his loyalty to his State and the cause so dear to him.

In the fall of 1904 Mr. Scholl went to Ohio State University and remained there for 6 months, returning to Texas in the spring to look after his apiaries. While at the University Mr. Scholl did remarkable work, considering his previous college training, and gained the esteem and respect of his instructors in all of his work, much of which was advanced courses in the natural sciences, notably botany, keeping in mind always the honey-yielding quality of the various plants. During his stay here he worked on his herbarium of honey-yielding plants, and now has a collection of some 300 species which is conceded to be the best collection of its kind to be found in any State. The plants are, of course, Texas species. After returning to College Station, work on the honey-plants was continued, and a compilation of notes also was taken up to accompany the plants. This matter was to have been published as a bulletin of the College, but on account of a recent change of officials the work has been delayed. Mr. Scholl resigned his position at College Station Dec. 1, 1905, in order that he might go back to his home in New Braunfels and enlarge and build up his own private bee-business, intending later to place it in the hands of a competent manager, and then resume his studies at the Ohio State University.

June 20, 1906, Mr. Scholl was married to one of New Braunfels' favorites —Miss Emma Froelich—and she was to accompany him "up North" when he came to resume his college work at Columbus, Ohio. At this time a most unfortunate accident befell Mr. Scholl, which nearly cost him his life, as no doubt it would had it not been for the constant care and nursing of the "little woman" whom he had taken as helpmate; and nobly she performed her part; for the accident was of a serious nature, a rib being broken over the heart. Blood-poisoning set in, and Mr. Scholl had about one chance in a thousand. But thanks to medical science and careful nursing, he is today as active as ever, after an illness of 5 months, in which our subject underwent several severe operations.

This spoiled the plans for the trip North, but did not cool the ardor for bee-keeping, and as soon as Mr. Scholl could get back home and around again, he could be seen about his bees, increasing his colonies here, buying more colonies there, and establishing new apiaries, which, this past summer, when the writer was with him, numbered 14, and scattered over the beautiful slopes of adjoining country here and there, the nearest apiary being 8 miles, and the farthest 197 miles from New Braunfels. Mr. Scholl regards this stretch of territory as important, in that it gives him a variety of flora, so that if there is a failure of the honey crop in one locality, he may get it in another. His past season's crop aggregated over 20,000 pounds, worth $2000, and this takes no account of wax and vinegar. Mr. Scholl produces both comb honey and extracted. The comb is "bulk comb honey," as they call it in the South, which is simply the comb honey cut from shallow extracting frames, such as Mr. Scholl uses, and packed in various-sized cans; then extracted honey is run in on the comb which is cut so as to fit snugly on the inside of whatever sized can is used. The proportions are 2-3 comb and 1-3 extracted.

The writer, who, by the way, is a bee-keeper on only a small scale, keeping bees for the fun of the thing as much as anything, and for study, was inclined to be skeptical in regard to Mr. Scholl's form of hive. Mr. Scholl uses only one depth of body for brood-chamber and super, and one and the same frame for brood-nest and surplus. Before leaving Texas a new convert had been gained for the divisible brood-chamber, and shallow frames identical for both brood and surplus. If you want to know the merits of this, read Scholl's articles. If they don't convince you, make a pleasure trip to Texas and have Scholl take you out to one of his apiaries where he keeps, for just such an occasion, several full-depth surplus bodies. After you have "hiked" a half-dozen or so of these heavy, bulky surplus cases out through the bushes and over the prickly pears, under the benign influence of Old Sol's most benevolent and broadest smile, if you still persist in clinging to such bungling appliances, we should say that there is probably no hope for such an one.

To continue our story, Mr. Scholl not only looks after his bees, but various side-issues as well, and these bring him in good returns. He is a hustler and a general handy man at anything that needs to be done about the house or home ground, or almost any old place in fact, and this very versatility has made him successful with his bees.

Mr. Scholl is a prolific writer, and contributes not a little to the various

American Bee Journal

bee-papers. His place in the "Old Reliable" as manager of "Southern Beedom" is too well known to require further comment.

Finally, if you have never tasted Southern hospitality, then you will have to do so to appreciate it, and Texas is a good place to go in order to get this taste. Wonderful country, and wonderful resources! In the words of Horace Greeley, with a slight modification, we believe it to be good advice to say, "Young man, go *Southwest.*"

Columbus, Ohio.

The Problem of Wintering Bees

BY PROF. A. J. COOK.

Shakespeare is so frequently quoted by our friends of the East—"This is the winter of our discontent"—that any words that may be helpful to the beginner will be welcome at this season of the year. The question has no importance to the bee-keepers of the Pacific Coast and will have less interest to our friends of the East when the principles involved are thoroughly understood, and guide in the general practice.

Nutrition and Activity.

We have from high authority that "He that doth not work, neither shall he eat." The reverse is equally true. If one does not eat, he can not do any effective work. All exercise of muscles or mind demands corresponding nutrition and nutrition only follows, among the higher animals, on eating and digestion. In California, where the bees fly every month of the year, they must eat much more than in the East, where they are confined and inactive for months together. In the East, if anything transpires that excites the bees, so that they move about to any considerable extent, they will, perforce, eat. But if they eat, there is danger of trouble, unless the amount is very slight, and the food of the very best.

Importance of Good Food.

Of course the bees are somewhat active in the coldest winters of the East, as they preserve the heat of the cluster, and must move somewhat. There is never a time when a blow on the hive will not meet with a response, by the bees, which show that they are alive and may become awake. Thus it is evident that the bees may—yea, must—eat even in winter, and when the cold is very severe.

We know that there are two kinds of food that the bees consume—the proteids and the carbo-hydrates. The pollen or bee-bread furnishes the proteids, and the honey the carbo-hydrate part of the food. We know that they often eat of the bee-bread, or have previously done so, as dissection shows pollen-grains in the stomach. I dare say Mr. Heddon was correct in his contention, that in long, cold winters bees were better with no pollen at all in the hive. Proteid food is essential for muscular development, and if the bees stir much they must have it. But if bees are very quiet in winter, it is safe to presume that they take very little pollen, or bee-bread; and it is safe to affirm that the taking of this food would do no harm were they to fly out often, and in such event would be absolutely necessary. But in the quiet of a severe winter, the bees will consume a little honey, and that should be of the best, and in such case it will be all digested, and will do no harm.

Wholesome Winter Stores.

We can never be too careful in giving the bees the very best for their winter supply. This requires—if we are to be certain—that we feed them the best cane-sugar syrup. Granulated sugar will always be wholesome, and as they store it, they will reduce it or change it to reducing sugar; it will need no digestion, and so the bees will safely take what is needed for their slight activity; and other things being right, they will surely winter well.

It is true that in most cases, if we feed what seems good honey, they will do well; but we can never know what there is in honey that the bees gather. Cider, rotten-apple juice, glucose from some grocery store or leaky barrel; honey-dew, which may be good and may be rank. So we see that there are many ways that the bees may have faulty stores, in case we trust to their natural stores for the winter supplies. It is wholly safe here on the Pacific Coast, but never safe where the rigors of an arctic winter swoop down upon the apiary. In case we do as Mr. Alexander advises—and it is sound advice—extract all in spring, that we may give room for brood-rearing, we may dispense with the cold, heavy combs that are a serious hindrance, in the midst of the brood-nest; and, best of all, may practice stimulative feeding—then we shall remove all the stores, and no one can complain that we are marketing artificial honey.

Quiet Very Essential.

Again, it is not enough that we see to it that the winter stores are of the best, but we must, at the same time, do all that we may to preserve the utmost quiet in winter. In the bee-cellar the bees must not be disturbed. Every disturbance means loss of bees, and all such loss weakens the colony, and courts disaster, in late winter and spring.

It may be true that in some cases the bees may suffer no little irritation, and consequent uneasiness, and still survive the winter. Bees differ in temperament as much as do people, and so some are less disturbed by noise than others; and, again, some become, apparently, used to confusion and noise, and so come through the winter with safety, even though this rule is not observed; yet we may rest assured that they will do better, if the quiet is secured, and it should be our aim and object to secure and maintain the utmost quiet that is possible. This involves good food, as poor food will disturb and irritate the bees. The same will follow from too severe cold. The very cold winters are generally the disastrous ones. We all know how our slumbers are affected by cold feet or a general sense of chill. I imagine that the same is true of bees, and the cluster will be disturbed by a sense of cold—will move, and as a result will eat too much; and, as they can not fly, will suffer.

I fully believe that one who will heed the above suggestions, will have no difficulty in wintering bees well every winter. The ideal condition is the best food, the greatest quiet, and a uniform temperature about and outside the hive of as near 20 degrees F. as it is possible to secure. Those who attain to this have little trouble to winter bees well.

Eucalyptus Honey.

I have always thought that honey from any plant would be good no matter how aromatic the juice of the plant, or what odors might pass from the leaves. I have grave doubts if honey is ever poisonous. We all know how strong the odor from the eucalypts is. I was eager to get some honey from these flowers, and a few years ago did so from Mr. Barber, of our Forestry Station. It was light and fine. The mints are very strong scented; yet what fine honey we get from the sages. The sap of the plant is no key to the nectar of the bloom.

Claremont, California., Nov. 11.

Honey Crop Reports and Prices

BY R. F. HOLTERMANN.

No one can read with careful consideration the various market quotations for honey in the United States and know their quality without realizing that the prices vary by several cents out of all proportion to the cost of transportation to the various centers. The prime reason of this is lack of organization among bee-keepers, lack of apicultural information (which may in a measure at least be secured through the various apicultural journals,) and to the difference of opinion as to the

American Bee Journal

outlook, due to difference of temperament in individuals.

It will probably ever be while this Church Dispensation lasts that the various articles of commerce will be bought and sold on speculation. If a man has goods to sell below what the market value is, he is not commercially wronged by others buying it. In fact, no one could buy goods and sell them unless he could make a profit on them.

PRICES.

Owing to the establishment by the Ontario Bee-Keepers' Association of a committee to secure reports of honey crops, to study all the conditions which might affect prices, and their so far doing their work with good judgment, we have been able to be more unanimous than formerly in the demand for prices on our goods.

This year our prices for first-class comb honey have been higher than ever before. The price has been fairly well maintained; the only cloud upon the horizon as to the maintainance of these prices has been the stringency of the money market with the curtailment of business generally and the lack of organization in the United States. With the price of white honey in the East so different from what it is in the West, I can come to no other conclusion than that Western bee-keepers underestimate the quality of their honey, or that they do not care to get the best price obtainable for their crop; or (and this is, of course, the most likely reason) they did not correctly estimate the market conditions. After paying 3 cents per pound duty we have actually had some lots of honey imported into Canada at 10½ cents per pound, laid down; tins supplied free. And yet alfalfa honey is now worth 9 to 10 cents in the United States. Lack of organization is then of interest to bee-keepers the world over. With organization, too, no dealer suffers what he loses one year by not being able to buy at sacrifice prices. He will gain in another when the tendency of prices is the other way, and by organization and the reasonable regulation of prices he can afford to do business on a smaller profit, *because he will run less risk by depreciation in value.*

Be the price high or low, there must be a legitimate difference between jobber, wholesale and retail prices, and if the dealer loses in his business he is more chary about his next investment.

HISTORY OF HONEY COMMITTEE.

The history of the Honey Committee of the Ontario Bee-Keepers' Association is this. In 1902, at the annual meeting of the Ontario Bee-Keepers' Association at Barrie, Ontario, the Ontario Honey Exchange was organized. In its report it states:

"Its object is to establish a reliable and fair market price for the product of its members, the more proper distribution of honey, and to establish, when advisable, foreign and distant Canadian markets."

"The main officers of the Exchange shall consist of 5 directors, elected by the members of the Ontario Bee-Keepers' Association at each annual meeting, and to hold office for one year, and shall direct all business of the Exchange. They will choose a location, and obtain by rental or otherwise a suitable office and ware-rooms in some central city, and that shall be known as headquarters."

In short, the plan was to sell—more or less co-operatively to handle the products of the bee.

In 1903, H. G. Sibbald gave a report of the Honey Exchange Committee, and by it showed that at a meeting of this committee at Woodstock, August 15, the following prices were recommended: 60-pound tins, 7½ cents in Toronto; comb honey, $1.65 to $2 per dozen. At this meeting it was moved by H. G. Sibbald, seconded by J. L. Byer, "that the Ontario Bee-Keepers' Association appoint a committee to collect crop reports and distribute the same to the members." This was carried, and upon this basis the committee has acted and advised as to prices ever since, with a more than full measure of success.

This committee may have more arduous work in the future than it has had in the past. The condition of commerce, the fruit crop, and home and foreign honey crop, and the duty on honey, all must be fully considered when regulating prices. It seems to me the United States, perhaps under the National Association, might with advantage do something under the above head.

Brantford, Ontario.

Production and Ripening of Extracted Honey

BY C. P. DADANT.

I notice in the November number of The American Bee Journal an article from Mr. Greiner on the ripening of honey, and one from Mr. Townsend, taken from the Bee-Keeper's Review, on the comparison of expense in producing comb and extracted honey. I wish to make some remarks on these subjects.

We do not leave our honey on the hives beyond the time necessary to mature each separate crop. That is to say, the clover honey, which with us is the first crop, is taken off the hives just as soon as the crop is at an end, and, without waiting for the next crop. It is our experience that honey is very promptly matured at the end of a crop, and it is unnecessary to delay extracting beyond two or three days after the crop has ceased.

If the harvest is very heavy, and we run short of supers, as happened during the crop of 1903, we never hesitate to extract to make room, before the crop ends. In that case, we remove the supers which were first filled by the bees, for in such seasons we have more than one super on each hive, and sometimes as many as 4. The last supers put on will, of course, contain the freshest honey, whether they are above or below the others. So we may take 3 supers off a very populous hive and leave one on, of partly sealed and partly very fresh honey. The others will be returned after the honey has been extracted, perhaps to be filled again before the end of that crop of honey. In my mind, it is during those very heavy crops that the advantage of the honey extractor, and its capacity for saving labor to the bees, is most apparent.

In the season of 1884, I remember extracting some 5,000 pounds of honey from an apiary of 89 colonies in 3 days. At the end of the third day, we examined the colonies from which we had extracted in the morning of the first day, and found most of them with honey in every cell from which the honey had been removed 3 days before. No amount of argument could convince me that those bees could have secured anywhere near *half as much* honey, and stored it, during the same space of time, if they had had to build the combs for it.

We do not believe in honey ripened after removal from the hives, by artificial means. But allow me to say that, in this matter, one must not be too dogmatic. There are a number of things which may cause a different result. The warmth of the summer, the greater or less amount of moisture in the atmosphere, according to location; and, above all, the condition of the honey itself when harvested—all these things, or each of them, will have an influence on the more or less difficult ripening of honey by artificial means. As good an authority as the late Chas. F. Muth, was strongly in favor of artificial ripening. Mr. Muth was a practical bee-keeper of long experience, who was also a honey-dealer, and handled hundreds of barrels of honey each year. He did ripen honey artificially in an attic over his business house in Cincinnati, and certainly had a very good article of honey, as I found by actual examination years ago.

The body of the honey, at the time of its harvest by the bees, is of very much importance. I know that it has been habitual to say that fresh-harvested honey contains something like 75 per cent of water. But there are times when it has much less water than this amount. Some grades of honey are always watery when harvested. Among these I will mention basswood honey. I have repeatedly found basswood honey that fermented in the hive, in the manner mentioned by Mr. Greiner at the foot of page 720. This and other reasons have caused me to say that the sealing of the cells by the bees was not always a criterion of the ripening of the honey, for evidently in both my experience and Mr. Greiner's, the bees had sealed this honey before it was sufficiently ripened, showing that they are apt to make errors of judgment as well as ourselves. On the other hand, when the crop is at an end, especially when it ends abruptly, as by frost, they often leave quite a number of cells unsealed, the honey of which is as thick as any sealed honey they may have; the reason they have for not sealing it is very probably that they have ceased to make comb and expect to use up that honey before long. It is simply a matter of expediency and economy with them.

That certain grades of honey are very thick when harvested may be evidenced from the fact that statements have repeatedly been made by some bee-keepers in the Old World, that

American Bee Journal

honey from heather was very difficult to extract from the combs on account of its density; some even go so far as to say that it cannot be extracted.

L. C. Root, the son-in-law of Quinby, a man of great experience in bee-culture, in discussing the ripening of honey, asserted to me that in his opinion, the thickest and best ripened honey is the slowest to granulate. I agree with this assertion. He went farther, and said that very ripe honey would not granulate. On this I think we should demur for the simple reason that there is very little if any honey that will not granulate under any circumstances. Even the thick heather honey, mentioned above as reported difficult to extract, granulates very readily. We have had honey, purchased in Louisiana, which was guaranteed by the producer to remain liquid. But we had not had it three weeks in our cold January climate of Illinois before it began to show the change.

I would most emphatically agree with Mr. Greiner in trying to keep the different grades separate. Nothing is more difficult to sell than a grade of extracted honey which is streaked in color by the uneven mixture of two different grades. When it becomes necessary to harvest mixed honey, I would insist on heating it and stirring it thoroughly to mix it. It is sometimes possible to make a very good grade of honey out of two very different crops. But much care must be exercised in not overheating it and destroying its flavor.

We had, at one time, a lot of pure basswood honey, from Lynnville, Iowa, which was so strong in basswood flavor that the average customer was afraid of it, and mistrusted its purity. We had also on hand a lot of very dark fall honey. We heated both and mixed them, and the blended flavors gave us an article that sold readily. The basswood changed the shade to a lighter color, and the fall honey had hidden the objectionable basswood flavor and odor.

In closing, permit me to emphasize the statement made by Mr. Townsend at the end of his article on page 720, as the report of his son:

"I could have worked 5 yards for extracted honey with the same labor it took to produce this crop of 2,300 pounds of comb honey."

My preference for the production of extracted honey is based on the same idea. A much greater quantity of honey can be taken care of. A less number of swarms secured. See Mr. Townsend's report on the same page—30 swarms when producing comb honey, and 5 swarms when producing extracted honey. To the beginner this may not be an important item, but to the apiarist who already has as many colonies as he cares to keep, the matter of undesired swarms is most important. What we want is honey—more honey—not more bees.

The only drawback to the production of extracted honey is the difficulty of its sale. This does not exist in Europe, and that is why so much more of it is produced there than here by large apiarists. Comb honey, in America, will long be of more ready sale than the other kind.

Some of the Results of Bee-Keeping in 1907

BY G. M. DOOLITTLE.

"How have the bees done this year?" is a question which comes to me from my correspondents. Another correspondent writes: "You used to report the result of each season in the bee-papers. Why do you not do it any more? Just tell us through the American Bee Journal the result from the bees during the year 1907."

This reminds me of what the bee-men used to be accused of years ago, when it was said at our bee-conventions and elsewhere, that when bee-men had a good season with a large yield of honey, they were sure to rush into print with the matter, setting bee-keeping out in glowing colors; but when a poor season came, they kept as mum as a clam, and thus only the rosy side of our pursuit appeared before the public gaze, this causing many to get a false impression of our occupation and rush into bee-keeping to the detriment of those already in, through an over-production of honey. I know it is easier to tell of our successes than of our failures; but I never believed that there could be an over-production of honey while there were hundreds and thousands of mouths watering for even a taste of the honey piled up in the bee-keepers' store-rooms or on the markets of our country.

But I am not asked for an article on over-production, nor could I properly "tackle" the matter had I been, so I will content myself in telling the readers of the American Bee Journal something of the season of 1907 and its results in southwestern Onondaga County, which is a part of the State of New York.

The bees came out of the cellar in fine condition, as good as I ever knew them to do, but after a few warm days it turned cold, and it kept that way till near the middle of June, so that on June 10, at a time when the hives should have been full of bees and brood, there was not a single colony that was as good as it was the day it came from the cellar, while many colonies were not half as good. Of course the season was late, but not nearly so late as were the bees, although everything was done that could be done to advance them along the line of prosperity. With June 20 warm weather came, and this pushed vegetation along very rapidly, so that I saw that if any results in surplus honey were to be obtained it must come along the line of massing the bees together, rather than a line of expansion. To this end, brood was taken from the weaker colonies and given to the stronger ones, so that these arrived in fairly good condition when the clover and basswood bloomed later on, at which time the plan of "shook swarming" was followed, and the beeless brood given to the weak colonies from which brood had been taken to help the stronger ones up to where this "shook swarming" could be done to advantage just at the commencement of the honey-flow. And to keep these colonies to which the brood was given from contracting the swarming fever before the time came to shake to the best advantage, all the combs not occupied with brood were taken out so as to give place for the frames of brood given, when these combs having no brood in them, but some honey, were placed in an empty hive, together with other reserved combs, sufficient to fill this extra hive, when a queen-excluder was placed on top of the hive of brood, and on this was put this hive of combs containing more or less honey. This honey helped the bees to keep up the brood below to its greatest capacity, and also gave a place for the storing of honey, should any little yield occur before the time was ripe for shaking; as well as to ward off any desire to swarm which might arise from the hive full of brood below. Besides this, it started the bees to work in the upper story, or the surplus apartment of the hive, if we please so to speak, so that at the time of shaking the bees were used to going above with any honey which came from the fields. And, besides this, at the time of shaking this hive of combs in which the bees had been at work for some time, was just the hive into which they were run when they were shaken from their brood, as it was necessary only to set this upper hive on the stand in place of the hive of brood, put on the supers of sections, and shake the bees in front.

They were then in their own home, as it were, but without brood, and as the queen continued to lay right along, the honey in these combs, together with that coming in from the fields, was rushed right up into the sections, through the force of habit they had acquired before the shaking. Every bee, or practically so, which was in both stories of the hive before shaking, was now in that hive of broodless combs and honey, and for this reason there had to be an overflow of bees right into the sections; and, as the queen demanded room for the laying of her eggs, and the bees also demanded brood for their future existence, all thought of future swarming was banished, and work with a will was at once begun right where it would count for money in the pocket of the apiarist.

The combs of beeless brood were piled 2 deep on the weak colonies, and the emerging of this brood soon made these colonies strong, with plenty of room for the storing of all the honey that came in from the fields, in the cells vacated each day by the thousands of emerging brood, for the queen was kept in her old hive by means of a queen-excluder before the hives of brood were set on top.

Now for the result of this massing plan in a poor season, for it proved to be the poorest of any season I have known since that of 1869:

The average yield of section honey from the colonies so worked was 61 1-3 pounds, or that many pound sections, while in the combs put over the weak colonies there is an average of about 45 pounds that could be extracted; but as I prefer to keep this for next season's use, it will be stored away to set over colonies next year in following out the

American Bee Journal

plan here detailed another year, should the year of 1908 prove something after the fashion of this year.

All colonies have sufficient stores for winter, as those lacking have been supplied from these combs of honey before the 45 pounds average was taken.

As far as the yield is concerned, I have done much better, but I think nothing like it before when the poorness of the season was taken into account. And I should not have given the matter for publication only with the hope of inspiring some one who does not have an "eye" on the season, to get the bees and the season together in some way, so that even a very poor season may count towards success. I know that there is considerable fun poked at "locality," etc., but I am firm in the belief that those who know how best to bring the locality, the season, and the bees together, will be the successful ones; while those who pay little or no attention to these matters, or scout the idea of there being anything in them, are those who are the most liable to be candidates for "blasted hopes."

Borodino, N. Y.

By W. A. PRYAL, Alden Station, Oakland, Calif.

In Union There is Strength.

"Bees accomplish nothing save as they work together—neither does Man."

This is one of the mottoes printed in good sized type that is conspicously displayed in offices in San Francisco. I presume it is so posted to induce the citizens of that unfortunate city to pull together and rebuild their city as never a city was built before. That's good. But looking at the words in another light, I am constrained to remark that the fellow who wrote the motto never had an opportunity to learn what one lone bee could accomplish when she got a genuine hustle on. A bull in a crockery shop might do more damage, but I am willing to go on record that he could not "skidoo" a crowd quicker han a hybrid bee whose business end was prepared for dire vengeance. For her size, there's nothing in the world that can put a crowd so quickly "on the run" as a bee on mischief bent.

Honey Prices Up.

I was in one of the leading grocery stores this afternoon in Oakland, making some necessary purchases, when I nearly lost my breath. Don't get scared, ye buyers of the necessaries of life; it was not from the fact that I went into such a store, or because of any ill effects of the commodities therein sold, that I came near collapsing. No, but it was this: *Honey has jumped up!* Yes, jumped—"soared," might be the better word. I saw one of the clerks wrap up a small section of honey for a lady customer and demand 25 cents for the dainty morsel. And he got it.

Just think! It was only a couple of years ago when I could never get more than a dime for the selfsame article. My! If my bees had produced only a few tons of comb-honey the past season, instead of a wheelbarrow full, wouldn't I be rich? Six dollars for each super turned off the hive instead of $2.40, as formerly! What a difference!

But how long will it last? I suppose next year honey will be down almost as low as ever. But the chances are that it will not. I noticed to-day that good eggs are quoted at 55 cents per dozen; creamery butter is 80 cents per "square" of two pounds. And these articles, too, are higher than usual at this time of the year. What must those do who can not afford to pay these prices? It is true that many men are getting higher wages than they ever did before, but then there are others who are not getting a cent more than they formerly received. I will leave the subject, as it is getting too grave to discuss in a bee-paper.

Death of A. D. Pryal.

As the March 14th issue of this Journal (p. 207) contained a short biographical sketch of my father, who could justly be considered one of the pioneer bee-keepers of California, it now becomes my painful duty to supplement such record with the announcement of his death. In the middle of last winter my father fell a victim to a bad attack of grip; for a time his life was despaired of. Along with that malady he was a sufferer from valvular heart trouble. He was sufficiently recovered, however, during April and May to be about and attend to his usual business, as he was always an active man, and liked to be engaged. It was while thus attending to business (he having gone with some of his employes to one of his places some distance from home) that he fell while climbing over a low rail-fence, and which fall is believed to be the cause of the abdominal abscess which terminated his life.

Thus, at the age of 76 years, passed away one of the best of men—a man who had been identified with the history-making epoch of California, especially of Oakland and Alameda County. The apiary he established on the old homestead in 1865 is still in existence, and is probably the oldest apiary in California that has been kept continuously in one place.

The Pepper-Tree and Eucalyptus.

In writing of the pepper-tree (page 333), I mentioned that Prof. Cook was wrong when he stated that it bloomed in April. I have always found it in blossom here in September; sometimes it would commence in August and continue through September. Now, strange to relate, I notice that a large pepper-tree on our place is just showing signs of blooming; in fact, a few blooms were expanding the 26th day of April. In May there was much more bloom. But I notice that the clusters are diminutive ones less than one-fourth the size of the bunches of flowers we have in the fall. The flowering of this tree at this time must, therefore, be abnormal. The tree must be getting the season mixed up somewhat.

This reminds me that some time ago, Prof. Cook in writing about eucalyptus for the American Bee Journal or Gleanings, I forget which, stated, as nearly as I can remember, that as that tree came from a country where it bloomed in the summer, it bloomed in the winter here. That does not seem right to me. I should think that if it, for instance, bloomed in July in Australia—which is south of the equator and the dead of "winter" of that end of the earth—it would bloom in January here. Does not a plant in the matter of blooming, etc., follow the seasons no matter where it may be transplanted?

Aside from the odd time of blooming I will mention this oddity of the pepper-tree. Drop some of the leaves in water and notice them sail about. They move by "fits and starts." The water causes little explosions in the leaves.

California—A Modern Mecca.

It may seem strange to some, nevertheless it is a fact, that a person who had lived a year or so in California, and for some reason or another was called to reside in some other portion of the world, is never contented until he is again back upon the fruitful soil and under the cheerful skies of the Golden State. For years I have observed how those who resided here for a time would come trooping back one after the other. A few months ago I had a letter from A. D. D. Wood, of Michigan, in which he stated he longed to return to California, and that he would surely do so as soon as certain ties which held him in the east were severed. I knew Mr. W. when he had charge of an apiary near here. I think he was in this State but 2 years. For the past few years he has been engaged, I believe, in rearing queens at his old home. It may not be many years before we hear of him as the leading California queen-breeder. And this is the place to rear fine queens. The wonder

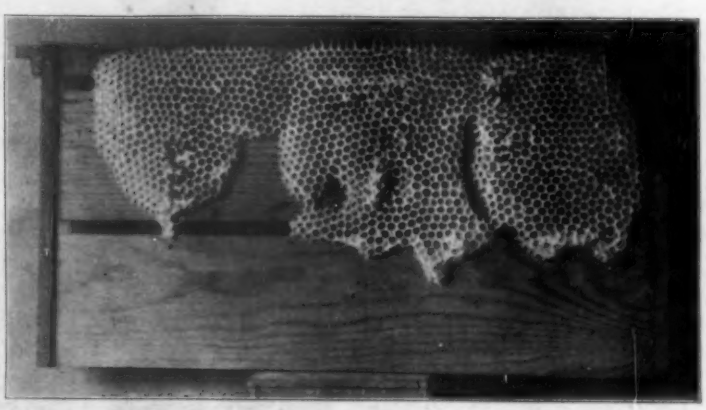
American Bee Journal

is that the business had not been made a large one here long before this.

Lately I heard that that veteran bee-keeper and apicultural bee-editor and publisher, Albert J. King, is again a resident of California. Prof. King lived here from the middle sixties, first at old Gilroy, and then later at what is now Oakland and Berkeley. He was the first principal of the Peralya School, then a district school but now one of the largest grammar schools in Oakland. From California he went East and was associated with his brothers in the sale of the American bee-hive, of which the latter were patentees. For some years he edited and published the Bee-Keepers' Magazine, now for some years defunct; then after he sold out his interest in the magazine he was interested in large apiaries in Cuba.

Another bee-keeper of more than common renown who lived in this State many years ago, as we are won't to compute time, was Prof. A. J. Cook. I never knew just how long he was here, but I read some time ago in one of the editions of his valuable work upon bee-keeping that he had resided in or near Sacramento. Any way, for many years we found him connected with the Agricultural College of the State University of Michigan, and where his work was such as to give him a world-wide reputation. But back to California he would come, and we have since heard of him in connection with Pomona College, in the Southern portion of the State.

And so it goes.



COMB BUILT ON DIVISION-BOARD.

want to use. The old-fashioned solid board is the board for me; I'm sure other bee-keepers who want results without handling flimsy contrivances that go to pieces upon the "slightest provocation," would sooner have a cast-iron "honey-board" than a "contraption" like the one pictured.

Conducted by LOUIS H. SCHOLL, New Braunfels, Tex.

Freakish Things Bees Do.

When some thing of a freakish kind is shown us, we at once become interested. I suppose that's human nature. Nothing seems to interest the average man or woman so much as bees. Maybe that's because bees are freaks, or the next thing to it. Now I don't want it understood that I make this indictment against those wonderful little insects. No, I do not, but some one else has. What I would do is to say that sometimes bees do some very strange things. Witness some of the queer work they will do inside the hive, and, occasionally without. Herewith I am showing a piece of their freak-work done inside of one of my hives during the last spring. The comb attached to the division-board was made in a space not much over one-half inch wide—it was between the division-board and the wall of the hive, and I discovered it in time, else the comb would have been built in the entire space. The industry of the bee is not commendable when performed in such cramped quarters.

The photograph is one of the very best I ever secured. The effect of light and shade are good; even where the comb was broken the effect seems realistic in the picture. Now, while we may criticise the bee for going out of her way "to ply her trade," I must not let this opportunity slip by without having "a shot" at some of the makers of freak bee-hives. I would class the honey-board shown in the cut as a freak one that no practical bee-keeper would

Prospects for 1908.

It is rather early to say anything about what the next year will bring us, but a good, wet fall and winter, so that our trees and shrubs are loaded with sap next spring, is generally followed with a good honey season. Rains have been very plentiful here and all over Texas and other parts of the South, and unless something very unusual happens, the bee-keepers may expect a good honey crop next year, for which preparations should be started at once, as now is the time to begin.

Bees Gather Rosin.

During this year I have seen bees do what I consider a remarkable feat, and something I never read of them doing, that I remember. The remarkable occurence is that of gathering rosin from pine boards, rich with the glue. I first discovered them gathering rosin from a very rich board last April. Several dozen bees were thus engaged, and before long they had completely cleaned the board, taking, I should judge, nearly a pound. During the summer the same board exuded another nice lot of the rosin, during which time the bees let it alone for the more useful work of honey-gathering. Just now the bees are again actively employed collecting rosin from this same board, and making some use of it, of which I have taken no pains to find out. I would guess that they are using it as a substitute for propolis to stick things up with.

If there were enough rosin-bearing boards around for all the bees to employ their spare moments, I surmise that an honest adulteration of beeswax would result. In the meantime, for my part, I do not care how much of the rosin they gather, or what they are doing with it. I am of the opinion that they will not adulterate their wax to any appreciable extent with this pine glue. I have no time to sit around and try to exploit their method of using this rosin.

I judge that some of our bee-keeping brethern in pine-wooded districts could be able to inform us to the extent of bees gathering rosin, and to the use they apply it. T. P. ROBINSON.

Bartlett, Texas, Oct. 28.

Bees gather a good deal of resinous propolis here in the South to close up cracks and crevises in their hives, and I am sure that's what your bees are using it for. A great deal of rosin can be found on our mesquite trees, sunflowers, etc., which the bees collect for this purpose, although I have not seen them on pine boards.

Bee-Keepers' Exhibit at the San Antonio International Fair, Nov. 9 to Nov. 24.

The exhibits this year surpassed all previous ones, though the work on them was begun very late in the season. This, however, shows what can be done in a good season another year, and preparations for next year's exhibit are al-

American Bee Journal

ready taken up so that the "cream of the bee-keepers' toils of 1908" may be hoarded together for the bee-keepers' exhibits at College Station, during the annual July meeting of the Texas Bee-Keepers' Association; at Dallas, during the State Fair; and then at the International Fair in San Antonio. Therefore, fellow bee-keepers, remember this during the coming year. When you have something for exhibition, let me know about it. Such exhibits are great advertisers of our own industry, you know.

W. H. Laws and D. C. Milam were the judges who passed upon the merits of the exhibits in the Bee and Honey Department of the Fair. The number of exhibitors and exhibits this year was the largest and most varied since the Fair was instituted, and as a result the judges had hard work in making their awards.

This year's display attracted great attention from nearly every visitor to the Fair. The observatory hives were a great source of constant interest, not only to the experienced bee-keepers, but also to the curious uninitiated.

The following rewards were made:

Best collection of Texas honey-yielding plants, pressed and mounted—1st, L. H. Scholl; 2d, Miss Meta Hillge.

Golden Italian bees and queen in single-comb observatory hives—1st, John W. Pharr; 2d, Grant Anderson.

Three-banded Italian bees and queen in single-comb, observatory hive—1st, W. O. Victor; 2d, Udo and Max Toepperwein.

Carniolan bees and queens in single-comb observatory hives—1st, Grant Anderson; 2d, Udo and Max Toepperwein.

Caucasian bees and queens in single-comb observatory hives—1st, Southwestern Bee Company; 2d, Udo and Max Toepperwein.

Cyprian bees and queens in single-comb observatory hives—1st, Udo and Max Toepperwein.

Holy Land bees and queens in single-comb observatory hives—1st, Udo and Max Toepperwein; 2d, Southwestern Bee Company.

Banat bees and queen in single-comb observatory hives—1st, Grant Anderson; 2d, Udo and Max Toepperwein.

Black queen and bees in single-comb observatory hives—1st, Southwestern Bee Company.

Best display of bumble-bees—1st, F. L. Aten.

Best and largest display of bees of various races in observatory hives—1st, Southwestern Bee Company; 2d, Udo and Max Toepperwein.

Best and largest display of queens of various races, in mailing cases—1st, Southwestern Bee Company; 2d, John W. Pharr.

Best case of white section comb honey, twelve pounds or more—1st, W. O. Victor; 2d, Wald C. Conrads.

Best case of light amber section comb honey—1st, Southwestern Bee Company; 2d, W.O. Victor.

Best and largest display of section comb honey—1st, W. O. Victor; 2d, Udo and Max Toepperwein.

Best display of special designs of comb honey—1st, Udo and Max Toepperwein; 2d, Frank Kraut.

Best twelve pounds friction-top pail white bulk comb honey—1st, L. H. Scholl; 2d, L. Jones.

Best six pounds friction-top pail white bulk comb honey—1st, L. H. Scholl; 2d, L. Jones.

Best three pounds friction-top pail white bulk comb honey—1st, J. W. Pharr; 2d, L. H. Scholl.

Best display of bulk comb honey—L. H. Scholl, both prizes.

Best dozen jars white extracted honey—1st, Southwestern Bee Company; 2d, Udo and Max Toepperwein.

Best dozen jars amber extracted honey—1st, Otto Sueltenfuss; 2d, Southwestern Bee Company.

Best display extracted honey, granulated form—1st, W. O. Victor; 2d, L. H. Scholl.

Best sample cake of bright yellow beeswax, not less than two pounds—1st, A. Fournier; 2d, L. C. Rosseau.

Best and largest display of beeswax—L. H. Scholl; 2d, Udo and Max Toepperwein.

Best display in special designs in beeswax—1st, Southwestern Bee Company; 2d, L. H. Scholl.

Best display of fruit preserved in honey—Southwestern Bee Company, both prizes.

Best honey-vinegar—1st, Moritz Rompel, 2d, Southwestern Bee Company.

Best instructive display in apiarian products and of the various uses made of honey and beeswax—1st, Louis Scholl; 2d, Southwestern Bee Company.

Best and largest display of bee-keepers' supplies—Diploma to Southwestern Bee Company.

Send Questions either to the office of the American Bee Journal, or to DR. C. C. MILLER, Marengo, Ill.
Dr. Miller does *not* answer Questions by mail.

Packing Bees for Winter.

For out-door wintering, would it be advisable to make a box-shaped frame that would sit over the hive, leaving a space of about 6 inches on each side of the hive to be filled with hay or straw, and leaving the entrance open? This would be kept reasonably dry.

KANSAS.

ANSWER.—Yes, if you change that "reasonably dry" to "very dry," for no matter how well you pack the sides, if the top is so poorly protected that rain or snow gets in at all, there will be trouble. You say nothing about what you will have over the top, but no doubt you intend to protect it well, for it is more important to pack well over the top than the sides. A good many think it is not well to have the front of the hive packed the same as the other 3 sides, but leave it open, so the sun can shine on it when a warm day comes.

Wide-Top Section-Holders.

1. What style of section-holder do you use? I take to the wide-top style, although I have never used any, but as J. E. Hand advocated in Gleanings, I think they would be the thing to keep the tops of the sections clean; but I do not understand how the sections can be removed easily after the bees have propolized them as all bees do.

2. Therefore, I have an idea that a section-holder could be made in a way that the top-bar could be removed easily, and in a moment's time, so as to get at the sections as in an open-top holder. Is such a complicated holder any advantage, or will a solid wide-top bar admit us to the sections without trouble?

MISSOURI.

ANSWERS.—1. I use the T-super. It is not boomed in the catalogs, and some who have tried it do not like it, but quite a number—some of whom produce honey on a large scale—prefer it; and, rightly used, I believe it the best surplus arrangement in existence.

2. Different kinds of section-holders have been made that have top-bars covering the sections, and I'm not sure but some one tried something in the line of a removable top-bar such as you propose. I have some doubt whether the game is worth the candle. In the wide frame which was extensively in use some years ago, and is still in use by some, there was not so much difficulty in getting out the sections, even with quite a tight fit, and after the bees had glued them in. I've taken out tons of such sections, and in some cases they were probably as tight a fit as you would have with a removable top-bar. Even with this latter, you would probably find that the bees would crowd in streaks of glue between the top-bar and section. Like many others, I prefer to have nothing over the sections to prevent the bees from having access to the tops, and bees will not put as much glue on a plane surface as in angles and cracks. What glue they do put on can be scraped off.

Bees by the Pound—Disease Carried by the Queens, Etc.

1. Would a pound of bees shipped from the South in the spring make a good colony of bees by fall, say to be shipped from Tennessee or Kentucky?

2. Would it be best to put such bees on full combs, or just on starters?

3. If I should send South for some queens and the apiarist from whom I purchased these queens had a disease in his apiary, by introducing them, would my bees be liable to get the disease?

4. What color is the abdomen of a 3-banded Italian bee beside the 3 yellow bands, black or yellow?

MINNESOTA.

ANSWERS.—1. Yes, if shipped early enough in a good season.

2. There would be a decided gain in giving them full combs; and they should also have the advantage of being kept as snug and warm as possible.

3. The most common way of carrying foul brood is by means of the honey; and if honey from a diseased colony were to be taken by the escort of worker-bees, or in the cage, you could safely count on introducing the disease into your apiary. It is generally believed

American Bee Journal

that the queen alone does not carry the disease; so when you receive a queen through the mail, and are not absolutely certain as to safety from the disease, introduce nothing but the queen alone. Take a clean cage and put the queen alone in it. Better make the change before a window in the house, so that if any workers of the escort get out you can kill them on the window. Then burn the cage in which the queen came, bees and all.

4. Back of the 3 yellow bands the rest of the abdomen looks about the same as that of a black bee.

Late Feeding of Bees for Winter.

I have a colony of fine Italian bees which have not stores enough to last them a month. I had to take it away last summer and have not as yet got it home. How can I feed it at this late day? It is in a chaff hive with extra super on filled with cushions.

ANSWER.—The best way is to give combs of sealed honey. Carefully take out the empty frames and put the combs of sealed honey close up to the bees, for if there is a space between the bees and the honey, and it should be quite cold for a time, the bees might starve without ever touching the honey. What's that you say? "Haven't any combs of sealed honey?" Well, that's about what I expected. But make up your mind that you'll always have them hereafter.

Well, if you haven't combs of sealed honey, maybe you have some honey in sections. You can fit some sections in a wide frame, or even a common brood-frame, by cutting away enough of the sections to make them fit in the frame. Rather an expensive way to feed; still, I've fed a good many sections in my time.

If you haven't the sections either, you can do quite well with candy. Take best granulated sugar and stir it into a very little hot water in a dish on the stove; but whatever you do, don't let it burn, for burnt syrup is death to bees in winter. Better not set it down in the stove-hole so the fire can touch the dish, but set the dish on top of the stove. Keep trying it, and when you find a little stirred in a saucer will grain, take it off quickly and pour into dishes making cakes ¾ of an inch to 1¼ inches thick. Put over the frames a cake of this candy that will pretty well cover the frames, or if cakes are small you can use more than one. Cover this with some kind of cloth covering, and shut up snug. Toward spring you may need to repeat the dose, but if you make the cakes thick enough and large enough no more will be needed for a good while. Your extra super on top will give you an extra chance to put on the candy and to pack it up warm.

Moth-Eaten Combs—Pollen.

1. I have a number of frames which look very ragged on account of moth ravages, some in which more than ½ of the comb is gone. Will the bees repair this and fill out the frames again if I give them to the bees next spring? or would I better cut out all this comb and put in new foundation?

2. All this comb is well filled with pollen. Will this keep over winter, and will it be all right to put in the combs next spring? My intention is to use these combs—8 frames of them—in a new hive next spring, for increase.

ILLINOIS.

ANSWERS.—1. If the comb is in good condition except for the ravages of the moth, it's good property, and it is well worth your while to keep it to give the bees again. Something, however, depends upon how the bees fill out the vacancies in the combs. If they fill them up with drone-comb, you might better melt up the combs and give foundation. If given to a strong colony in a flourishing condition you can count on a lot of drone-comb; if given to a nucleus, or to a swarm when first hived, you may count on worker-comb.

2. Pollen keeps well through winter, unless you keep it in a mouldy cellar, and pollen in good condition, pound for pound, is often worth as much as honey.

Amount of Sugar for a Pound of Honey.

Recently I had a suspicious customer—I often have them. I told him I did not know if bees would put glucose syrup in comb and cap it over. I agreed with him that they would put good sugar syrup in comb and cap it over, but from a little experience I had in feeding up weak colonies I had my serious doubt whether there would be any profit in it, or at least the profit would be so small that the consumer would have little to fear from that kind of a fraud.

Aside from the fraud, the work, exciting the bees to rob, and that we must feed till the body of the hive is full before the bees would put anything into the super, how much sugar would we have to feed for each pound section we would get filled? ILLINOIS.

ANSWER.—I don't know. After everything was filled up so that the bees really began storing in sections, it is possible that it wouldn't take much more than a pound of dry sugar (of course the weight of syrup would be more) to make a pound of the stored—whatever you would call it. If any one knows any more than I do about it, please tell.

Hives Full of Frames for Winter.

It is perhaps a little late to ask the question, still I should like to know if it is good policy to keep all the frames in a 10-frame hive over winter, even though the cluster occupies only about 4 or 5 frames. Would you advise me to remove some of the frames and to put in a division-board? I use chaff-hives, and thought that everything was in good shape as it is, without removing any frames. NEW YORK.

ANSWER.—Some time ago an eminent authority in France made experiments to compare the heat in a hive having part of the frames occupied by a colony and the hive filled out with empty combs, but separated by a division-board, with the same thing without a division-board. A thermometer showed there was no difference, and he decided that a division-board was no better than an empty comb. Since then it has been pointed out that although a thermometer may have shown precisely the same temperature in one case as the other, that does not by any means prove that the division-board did no good, for in the second case the bees burnt more fuel (consumed more stores) to keep up the heat, and we know well that the more the bees eat the more their intestines are loaded, and the shorter confinement they can endure.

Clearly it would have been better if so much empty space had not been left for the bees to keep warm. Whether it is better to make any change now is another question. If the bees are in a cellar whose temperature is 45 degrees or more, it will almost surely be better not to make any change, for the disturbance will probably do more harm than the change will do good. If the bees are on their summer stands—really I don't know enough to say whether it is best to make any change or not; but I half believe I'd risk them as they are.

Preventing Swarming—Location for Observation-Hive.

1. I have 4 colonies of bees. If I take say 2 frames from each colony and form a new colony just before swarming time, would it have any effect in preventing swarming? Or is there a better way?

2. Has the Lyman method of swarm-control any advantage over natural swarming, except the necessity of watching the bees? If so, what is it?

3. What is the best location for an observation-hive? Would an attic with a southern exposure be good? or would the attic with a northern exposure be best? or what is the best?

CONNECTICUT.

ANSWERS.—1. There is a great difference in bees about swarming, some colonies being much inclined that way, others very little. Taking 2 frames of brood from a colony of a very swarmy disposition would be likely to have but little effect. Even a colony not very bad in that respect would not be much affected by it if the frames were taken away after preparations for swarming were well on the way and queen-cells well started. Suppose, however, that we have a colony not greatly given to swarming. Indeed, the season is pretty well along, and as yet no queen-cells are started, although the colony is strong, so strong that within a very short time it will start queen-cells, and if we take away 2 frames of brood today it may be sufficient to make it give up all thought of swarming. So you see it depends upon circumstances.

2. Yes, with the Lyman method the forces of the colony are not divided up as they are with natural swarming.

3. The best location for an observation-hive is one that is most convenient for the observer, and at the same time comfortable for the bees. The most convenient place for you might be in one of the living-rooms, and that would likely be comfortable for the bees. But there might be objections to that, such

American Bee Journal

as the meddling of children, driving you to the attic, where there is danger of too great heat on the south side. In some attics the north side would be all right; in others still too hot. To decide just the place for you, conditions, and also premises, must be carefully considered.

Roofing-Paper for Winter Cases—Wintering on Summer Stands—Do Bees Store Candy Feed?

1. I have 4 colonies of bees. For 2 of them I have wooden cases for winter, with a 3-inch space all around, which I pack with excelsior. I also put excelsior on top. Would 2-ply roofing paper fastened around the hive and over it, be as warm as the wooden case and packing? If not, would cushions 3 inches thick, filled with excelsior or corn-husks, and then covered with roofing paper be as good as the wooden case?

2. How do you winter bees on the summer stands?

3. When bees are fed candy, am I right in thinking that they consume it only as they need it, and do not store it in the combs? CHICAGO.

ANSWERS.—1. I doubt that the roofing paper alone would be as good as the wooden case and packing, but it is likely the cushions and roofing paper might be even better. Something, of course, depends upon the closeness of the two different coverings. It is probably easier to make the wood close without cracks than the paper. But granting equal closeness in each, the paper might be the better, especially if dark-colored.

2. I don't winter my bees on the summer stands, but in cellar. When I wintered on the summer stands some years ago, I was not as successful as in the cellar.

3. You are right in your view.

Home-Made Comb Foundation.

I keep a few colonies of bees for my pleasure and have saved some wax. Now, I don't like to sell wax for 20 cents a pound and buy foundation for 65 or 75 cents per pound. Can you recommend the Rietsche press? If not, say "No" to my second question; but if you can, please give a few hints as to how to make foundation.

1. Are you making your own foundation?

2. Could I make foundation? I have never seen it done. OREGON.

ANSWERS.—1. My time has always been so fully occupied with other things that I never tried making comb foundation. Besides, I think I can buy it cheaper than I can make it. I use foundation mostly for sections, and it would take a good deal of practise to enable me to make anything like as nice foundation as those who make a business of it.

2. There are thousands of Rietsche presses in use in Europe, and in the foreign bee-papers one sees nothing but praise for them. With the instructions that you would receive with the press without doubt you could succeed, even without ever having seen foundation made. It is claimed that with the press the foundation is softer and more acceptable to the bees. Situated as you are with regard to prices, I think I would get a press to make my brood foundation, and probably do some experimenting to see if I couldn't make it thin enough for sections.

Bees Deserting the Hive.

I transferred a colony of bees from a hollow tree to a Danzenbaker hive, filling up 4 or 5 frames with the combs from the tree. The balance of the frames had starters in them. After a few bees had gone into the hive I found the queen, caught her, and put her down among the frames. I left them there until the next day, and when I went back to get them, all of the bees were gone. What made them leave? I can't figure out any reason. There were young bees, eggs, and brood in the combs. OKLAHOMA.

ANSWER.—At this distance of time and place it isn't the easiest thing to make a guess. One of the most common causes of bees deserting a hive is high temperature. When a freshly hived swarm is set out in the broiling sun on a hot day, you may count fairly well on the bees deserting such an uncomfortable place. But it may be that your bees were in cool shade. Nothing is said about how far the hive was from the tree, their old location. If you took the bees a mile away from the tree, they would be more likely to stay. But if only a few rods from the tree, then many of the field-bees, if not all, when they returned from their first visit to the fields, instead of going to the hive, would return to the old location. Then it would be nothing so very strange if the balance of the bees would have a lonesome, discouraged feeling, and would take French leave. But as to knowing anything for certain about it, I suspect that as long as you live, every time you think about it, you can only say, "I wonder what made those bees leave."

Queen-Bee to Start a Colony.

Will you kindly give me the address of some reliable person from whom I can order by mail a queen-bee? Will this be sufficient to start a colony? How are they to be fed in winter?

TENNESSEE.

ANSWER.—My good friend, this is not the best time in the year to make a start in the bee-business, and it isn't best to start with a queen alone. I think at this point that I hear some one say in a superior manner, "Why, any fool ought to know that colony of bees was never started with a queen alone." Now look here, don't you be getting too smart. I've heard of a colony being started with nothing but a queen, and if you never heard of it, it's time you did. What's more than that, lots of colonies have been started that way, lots and lots of them every spring. Of course they're bumble-bees, but one doesn't know about such things till one learns.

Hive-bees are social beings, and a queen will not make much headway without a few thousand handmaids as helpers in the form of worker-bees. So you must start with a full colony or at least a nucleus, which means quite a small colony.

Before it is time to make a start in spring you will find queens and bees advertised in the American Bee Journal.

Look at the answer to "Indiana," as to feeding in winter; but if you are wise you will never need to feed in winter.

Best thing for you to do is to get at once a book of instruction about bee-keeping—you'll find them advertised in this paper—and make a study of it this winter. You'll save more than the price of the book in the mistakes you are likely to avoid next summer.

Rearing Queens.

Last spring I sent to Texas for a queen-bee which I gave to a queenless colony that I thought was strong enough to be worth requeening. The queen proved to be so good a one that I concluded that I wanted some young queens from her, and so gave her unlimited space for laying. I used a few combs containing eggs and larvæ in hives of queenless bees. At the end of the early white honey-flow and, before the later flow began, the queen had established herself in the second story and had several combs of brood there. The lower story had 3 or 4 combs of sealed and hatching brood, but no larvæ so young that queens could be reared from it. I found the queen in the upper story and took the comb she was on and placed it in another hive with all of the combs from this upper story that contained any brood. Then I took a comb from the lower story, containing only honey, and gave in its place the comb from the upper story, on which the queen had done her latest laying. The bees of the lower story went immediately to work and started a lot of queen-cells on this comb. I think I found one cell started on another comb, but this I destroyed. All the queens I reared on the comb given did good work later. Is there any reason why queens thus reared should not be as good as those reared by any other method? IOWA.

ANSWER.—Let's see. You divided a very strong colony into 2 parts. In one part was the queen and frames of the later brood, in the other part the more mature brood and one frame of the youngest brood. Of course, also, plenty of nurse-bees in each part. One part, supposedly, was put on a new stand, and the other left on the old stand. If the queen was left on the old stand, and the queenless part put on the new stand, the field-bees would all go to the old stand, leaving the queenless part practically in a dearth of honey, and you are not likely to rear the best queens when bees are feeling to any degree the dread of starvation.

I do not think, however, that was what you did. I think you left the queenless part on the old stand, and with plenty of nurse-bees to take care of the queen-cells, and abundance of honey coming

American Bee Journal

in, the bees would be in best condition for queen-rearing. You will be told, however, by some good bee-keepers and intelligent, that the bees will be in such a hurry to rear a young queen that they will select larvæ too old for best success. So if there was anything beyond eggs and very young larvæ in the frame of unsealed brood given them, you may expect some poor queens, *if* those men are correct. I do not at all believe they are correct, and my belief is based on a pretty large experience in allowing queenless bees to make their selection from brood of all ages. This, however, I have experienced: The bees continue for several days to start fresh cells, and the last started may be with too-old larvæ. So it is better to reject these latest cells. But if you have virgin comb filled with eggs and brood as given in "Forty Years among the Bees," page 237, and have your queen-cells built from this, you may count on *all* the cells being started from larvæ young enough. Just why this difference I don't know, only that I have reared hundreds of queens in that way, and think I have had good proof that none of them were reared from larvæ too old.

Black Bees in Italian Colony — Fall Feeding — Non-Hatching Eggs.

I have just finished reading "Forty Years Among the Bees." I found it very interesting and instructive.

1. I had a colony swarm July 13, 1906. The young queen was very small, and never laid. August 9 I replaced her with an imported golden queen. During last spring the black bees gradually disappeared, but there were always 3 or 4 to be seen fanning in the entrance in the same corner every fine evening. June 22, 1907, I divided them, putting 4 nuclei in one 10-frame hive, and stuffed the entrances with grass. When I pulled out the grass there were 6 black bees dead in one entrance. These were the only black bees I could find in the nuclei, and the only bees that were dead, although some of the others were very weak and unsteady from suffocation. Is it possible that these bees were the daughter of the old black queen that swarmed July 13, 1906? Her swarm gradually weakened during the fall and died in early winter. My one other colony was headed by a leather Italian. There are no other bees within 2½ miles as the crow flies.

2. Is there any danger of feeding too much or too fast in the fall, either from troughs outside or from feeders inside the hives?

3. Is it common for a queen to lay eggs that will not hatch? I do not remember reading of any. I reared 6 leather queens the past summer. They are heading 6 strong colonies now. I also reared 6 golden queens. Only one of them laid, but her eggs did not hatch. She was the largest and finest-looking queen I ever saw, and laid as many as 6 eggs in some cells. She had more bees than some nuclei that did well.

PRINCE EDWARD ISLAND.

ANSWERS.—1. That's a tough one. It hardly seems credible that a worker-bee should have lived through from July 13 to the end of the following June. It is often the case that black bees stray in from other hives, but they would hardly come 2½ miles. It might be that your yellow queen was not purely mated, and some of her progeny black, but in that case the number of black bees would hardly be so small as you seem to mention. I give it up.

2. If fall feeding must be resorted to, the faster the better. For late in the fall all that is expected of the bees is to store what is given them, and as it is given them, whereas when fed at the earlier and better time the feed should be thin and the bees should have time to make the proper changes in it.

3. It is very uncommon. In 47 years' experience I have had only a single case of the kind to my knowledge; and I have read of very few cases. You are not likely to have another. Of course the trouble is with the queen, and the only remedy is to kill her and replace her with one that can lay a better brand of eggs.

Possibly it may be well to mention that any queen may lay eggs that do not hatch, but in that case the fault is not with the eggs. It is perhaps the usual thing in the fall that the last eggs laid by a queen do not hatch, probably because the bees do not furnish heat enough, and the same thing may sometimes occur in the spring. But as I understand it, in the case you mention everything was favorable for the hatching of any properly disposed egg.

Answering Questions — Wintering Bees Under Snow-Drifts — Tartaric Acid in Winter Stores.

1. Why do we never get any answers to the questions we send to you through the question departments of the various bee-papers?

2. What will be the result of wintering bees out of doors in a locality like some parts of the coast where a large proportion of the snowfalls are accompanied by high winds, that cause the snow to pile up in huge drifts and banks that often bury small objects like a beehive completely, sometimes 6 feet deep? In dividing some of my colonies last summer I unwittingly placed several hives in a location which I have since been told is in the direct path of the worst snowdrifts in the neighborhood. In fact, this is within a narrow space that catches the drifting snow from off a large field during successive snowstorms and which at times is 10 feet deep. I am very much averse to moving a colony of bees after it is once established in a place, especially during cold weather.

3. Although the following question is somewhat out of season, will you tell us the result of your experience in mixing tartaric acid or other acids with sugar syrup for winter stores? I haven't had time to experiment in this, and this fall I followed Prof. Cook's advice according to his book, and put an even teaspoon of tartaric acid into 15 pounds of syrup. I think this amount of acid is altogether too much for the amount of syrup. I believe much less acid in proportion would keep the syrup from crystallizing. The bees evidently do not like it.

4. What is the result of mixing the acid with cold or boiling syrup, relatively, and in different proportions?

MASSACHUSETTS.

ANSWERS.—1. I don't know. Certain it is that a goodly number of those who send questions get answers, as is abundantly testified by the amount of space occupied each month in this department. I think I have made replies of some kind to every question ever sent me, when the writer told me in what publication he wanted the answer to appear. If, by some strange means any letter of yours has come under the head of "lost, strayed, or stolen," let us hope it may not occur again.

2. Reports of results when hives were buried in deep snow have not always been the same. I think that in most cases it has been reported that the bees have done well, the snow making a fine protection, being porous enough so there was no suffering from lack of ventilation. I have no distinct data at hand, but if memory is not at fault some cases have been reported in which the bees seemed too warm, breeding being started, with diarrhea following.

3. Some years ago I had considerable experience in feeding up for several winters with tartaric acid in syrup. I used an even teaspoonful of acid for 20 pounds of sugar. I think it worked all right. How much acid that would be to a given weight of syrup depends on the strength of the syrup. For winter feeding I used 5 pounds of sugar to 2 of water, and that made a teaspoonful of acid to 28 pounds of syrup. Prof. Cook's teaspoonful of acid to 15 pounds of syrup looks just at first glance as if he made it about twice as strong with acid as I did. Whether he really did so depends upon the strength of the syrup. Referring to Cook's Manual, edition of 1902, page 266, where he mentions an even teaspoonful of acid to 15 pounds of syrup, it will be seen that he says, "We use equal parts of sugar and water." With the proportion of a teaspoonful to 20 pounds of sugar there would be a teaspoonful to 40 pounds of half-and-half syrup. That, against his 15 pounds of syrup, shows that he made it 2 2-3 times as strong as I did. Mine seemed to be strong enough, and yet I think at least one man reported that with the same strength as I used his syrup granulated.

Of late years I have used no acid. If I fed at all I gave half-and-half syrup in August or early September, and the bees made it all right without any acid. I cannot help thinking this is better than later feeding with acid. My feeders are becoming idle capital, as the pasturage has so changed that a fall flow may always be counted on.

4. I have had no experience as to different proportions, nor as to stirring acid into cold syrup; but I should think it quite difficult to get the acid well mixed in the syrup. My plan was to dissolve the acid in a cup of hot water, and then stir it into the hot syrup. But I don't believe it advisable to use acid at all. If you must feed, feed thin enough, and early enough, and the bees will do the rest.

American Bee Journal

Reports and Experiences

Fine Shape for Winter.

The bees in this district have gone into winter quarters in fine shape.

JOHN S. SEMMENS.

Konantz, Colo., Nov. 4.

Outlook Good in Cuba.

The outlook seems quite good for a good honey-flow this fall unless the rains stop suddenly. But the preceding 9-months' drouth and cyclone, with the flood, have killed almost one-half the bees on the island.

M. E. ENGLE.

Los Palacios, Cuba, Oct. 20.

Fair Fall Crop of Honey.

We have had a fair crop of fall honey, and all sold so far at 10 cents a pound for extracted and 15 cents for comb, packages not included. Oceans of white clover came up last spring which is in fine shape now.

S. F. TREGO.

Swedona, Ill. Nov. 11.

Honey and Prices Better.

The weather is "fine as silk." Bees are on the summer stands and having frequent flights. The honey crop, while not a bumper one in size, in quality was the very best, and the prices much improved over former years. Bees appear in general to have plenty of stores to tide them over winter.

F. W. HALL.

Hull, Iowa, Nov. 16.

Rocky Mountain Honey—Wintering on Summer Stands.

1. I send you to-day a sample of my honey, and would like to know what you think of our Rocky Mountain product.

2. My hives are the Langstroth. The bees are strong, and I have left them on the summer stands. I put the bees all in the lower hives and put 4 thicknesses of gunny-sack over the frames, and left the top-boxes on full of honey for a reserve, and the lower hives also have plenty of stores. What do you think of that for winter?

UTAH.

1. The honey is very good indeed. It is so white, and the grain is so fine.

2. The commendable part of your packing is the great amount of stores left for the bees. A strong colony of bees will stand almost anything else if only they have abundance of stores, and are allowed to arrange those stores to their own notion. Too often the question seems to be, "How small an amount of stores can I leave the bees and risk their getting through the winter?" while you seem to ask, "How much can I manage to leave with the bees for their winter supply?" And in that you are wise.—EDITOR.]

Extra Year for Bees.

This has been an extra year for bees and honey. Bees are going into winter quarters in fine condition, with both plenty of bees and plenty of honey. The past season I secured something like $50 worth of honey (1025 pounds) and 2 swarms. Big yarn, but nevertheless it is true, and the honey is fine.

G. W. VANGUNDY.

Jensen, Utah, Nov. 3.

Virginia Bee-Keeping.

I have been down in Palmyra, Va., visiting my brother. You should see the Southern bee-hive, or "gum," as they call it. It is about 10 inches square, 2 feet high, with a space of about 6 inches of the top partitioned off for surplus honey. It was suggested that as I was a bee-keeper that I take away the surplus honey that evening, as it was cold enough to make the bees numb, and, in their opinion, make them less apt to sting me! I told them that I preferred to take the chance in the middle of the day. So the next day about noon they reminded me that it was warm enough for the bees to swarm, and offered to hunt up some gloves and old mosquito net if I wanted it, but I thanked them and lighted a bit of pitchy pine and blew a little smoke in at the entrance, then a little more at the top. Then I went to work and took the surplus honey out, and "took up" one late swarm without getting a sting, which they thought remarkable, as one bee chased 5 or 6 men away from me. Now those bees were quite a small variety of the black bee, so-called Italian bees down there.

I think that they have model places for the bee-business. If they would wake up and jump over about 50 years, and get modern hives and transfer their bees into them, they could make something out of their bees. I think that their bees are inclined to be milder than our black bees, and while their honey is not so fine flavored as our white clover and basswood, it is very rich.

E. E. KENNICOTT.

Glenview, Ill.

Keeping Bees for Pleasure.

While the majority of writers tell us about keeping bees for the dollars and cents there is in it, I am going to tell you about my keeping bees for the pleasure there is in it.

My work is in a railroad office, and is very tiresome and trying on the nerves to one with poor health. My health is broken down, and I have not seen a well day for the past 10 years. Yet I try to nerve myself up and push forward, and not allow myself to stop and think about how bad I do feel.

To explain matters more fully, 25 years ago, while employed as a railroad brakeman, and in the act of coupling cars, my foot slipped, and I was caught between the bumpers of the cars and had my entire lower jaw and tongue crushed out. This left me in a very trying position. At first I could not eat any solid food and could not talk, not even able to utter a sound of any description. All the surgeons and doctors who had charge of me at the hospital, as well as those that came to the hospital to see me, told me that I would never be able to speak again, as the organs of speech were all gone. This was a hard blow and made me feel very bad, as it was hard to think of going through life and not being able to speak. The old adage, "Where there's a will there's a way" came to me, and I thought, "I have the *will;* will the *way* be provided?" The Lord heard my faint call for help and came to my aid, as He will to all those who will only let Him. He gave me the gift of speech, and although it was the hardest work I ever did, I finally learned to form words so that I could talk. This has been one of the greatest blessings that I could have received. As to my eating, I have to take my food specially prepared so that I can eat it. As I can not chew any of my food, my stomach has double work to do all the time—that of mastication and digestion. Therefore I have suffered greatly with my stomach, and have at times such a distressed and nervous feeling.

I get 2 hours at noon. One I spend eating my dinner, and the other I spend working with my bees when the weather is favorable. My bees have been a great benefit to me in regard to my health. When I come home from the office weary and nervous, and on the ragged edge of despair, instead of sitting down and worrying about how bad I feel, I will go out to my bees, open up the hives and watch them working, when the sight of the little fellows hustling and tumbling over each other in their hurry to get in and out of the hive, seems to drive all the worry and care away, and makes me feel like a new man. Therefore I feel that my bees have been both a great pleasure and a benefit to me, as well as supplying myself and family with good, delicious honey, of which we consume from 350 to 400 pounds per year, using extracted honey in place of fruit, butters, jams, etc., as it is much more healthful. I use bread made from the whole-wheat flour, and spread each bite on both sides with extracted honey in order that I may be able to eat it. I find that the honey is very healthful and also very nourishing, and I feel much better after eating it than if I eat fruit butters, jams, etc.

Now, while I got away from bee-keeping to a certain extent, yet I feel that there are hundreds of others who have poor health that would be greatly benefited if they would get a few colonies of bees, a good bee-book, and one or more good bee-papers, and spend their leisure hours working with the bees, reading the bee books and papers, and try to get what pleasure they can out of life instead of worrying and fretting over what can not be cured. One can keep bees almost anywhere. I have my bees on the rear of a small village lot, and they do not molest any one.

J. T. ELLIOTT.

Colliers, W. Va., Nov. 26.

American Bee Journal

Index to Volume XLVII.

SUBJECTS

Adulteration of honey—358.
Advertising honey—206, 257, 309, 415, 546, 681.
Afterswarms—661.
Age of larvæ for queen-rearing—466.
Age when queen does best work—545.
Aggassiz Association—450.
Alexander feeder—266.
Alexander weak-colony plan—449.
Alfalfa honey in Ontario—651.
Alfalfa pollen—205.
Alsike clover—338, 490.
Alsike with red clover for bees—93.
American bee-keepers criticised—455.
American Breeders' Association—456.
Among the bees 6 weeks, a girl—112.
Amount of honey per acre—534.
Amount of sugar per pound of honey—755.
Answering questions—125, 126, 757.
Antennæ of bees—538.
Anti-swarming—414.
Ants in the apiary and hives—485, 696.
Apiarian exhibits and premiums at Fairs—616. 648, 712, 715, 722, 744, 753.
Apiarian Matters—624.
Apiarian progress—619.

APIARY OF—
Adkins, Geo. H.—226.
Anderson, N. P.—534.
Banker, Otto—206.
Caley, G. D.—681.
Coburn, John P.—350.
Darrow, Chas. M.—370.
Dysart, Samuel—350.
Gray, H. E.—106.
Hoffman, Fred—47.
Kennicott, E. E.—410.
Rigg, Thos. M.—730.
Salazar, M. A.—680.
Sauer, G. L.—430.
Shannon, Robert—278.
Stevens, John—46.

Apicultural progress—430.
Apis dorsata combs—75, 185.
Armful swarm of bees—86.
Aster honey, peculiar odor of—97.
Automobiles condemned—527.
Average buckwheat yield per acre—632.
Average honey crop—533.
Average yield per colony—593.

Back-yard bee-keeping—318.
Bacteria of the apiary—687.
"Badger" bee-keeper in Texas—374.
Baiting wild bees—469.
Balled queens—629, 646.
Banat bees—429.
Basswood growing—245.
Bears and bees—265.
Bee a Sabbath-breaker—166.
Bee-candy—205, 213.
Bee-cellar construction—286.
Bee-cellar heated with electric heater—191.
Bee-Cave—682.
Bee-culture vs. horticulture—109.
Bee-diseases, studying—75.
Bee-glue—437.
Bee-houses or hive-covers—594.
Bee-inspectors for Ontario—114
Bee-keeping a "queer calling"—92.
Bee-keeping for farm boys and girls—151.
Bee-keeping for women—30, 282.

BEE-KEEPING IN—
Arkansas—267.
Australia—743.
Bee-County, Texas—130.
Berkeley—243.
Bermuda—682.
California—280.
Carniola—484.
Cuba—232.
Danube—727.
East Africa—48.
Indian Territory—155, 196.
Lake Superior district—318.
Michigan—523.
Montana—339.
New Zealand—617.
North Carolina—723.
North Dakota—318.
Oklahoma—196.
Rio Grande—711.
South (first in)—129.
Southwest—747.
Virginia—758.
West Indies—719.

Bee-keepers, transient and permanent—71.
Bee-Man (poem)—615.
Bee-moth larvæ—286, 628.
Bee-paper—making it helpful to all—25.
Bee-paralysis—55, 111, 396, 466.
Bees and colors—533.
Bees and fruit—109, 237, 264.
Bees and grapes—14, 33, 85, 110, 216, 246.
Bees and honey for 1907—741.
Bees and horticulture—693.
Bees a nuisance, claims—566.
Bees as blossom-fertilizers—453, 454.
Bees at Jamestown Exposition—298.
Bees attack passengers—743.
Bees building up—565.
Bees by the pound—754.
Bees capture a new home—588.
Bees carrying water at night—600.
Bees deserting hive—756.
Bees exterminating bugs—533.
Bees hanging under brood-frames—660.
Bees in a funeral procession—49.
Bees increase church fund—711.
Bees in the ends of the earth—194.
Bee-smoker, use of—191.
Bee-smokers—30.
Bees moving eggs—535.
Bees race pigeons—712.
Bees robbing in the spring—355.
Bees starved in the cellar—589.
Bee-stories—49.
Bees tearing down foundation—196.
Bee-sting poison—28, 116, 372.
Bee-stings—16, 93, 587, 662.
Beeswax candles—569.
Beeswax cleaning—416.
Beeswax for floor-polish—71.
Beet vs. cane sugar—614.
Bee-veils—191, 263, 523, 535.
Beginners and the bee-papers—172.
Beginners in bee-keeping, first things for—8, 215, 280, 413, 691, 694.
Benton's search for new races of bees—584.
Best bees for comb honey—246.
Better-natured bees—284.
Bingham hive—132.

BIOGRAPHICAL—
Drake, F. H.—502.
Estabrook, A. H.—502.
Gates, Burton, N.—502.
Goodell, Chas. H.—502.
Muth-Rasmussen, Wm.—725.
Scholl, Mr. and Mrs. Louis H.—66, 747.
Smith, L. B.—70.
Pryal, Andrew D.—207.
York, Sallie Ward, 713.

Black bees from an "Italian" queen—593.
Black bees in Italian colony—757.
Black bees vs. Italians—105, 262, 174, 247, 371.
Black brood—633.
Black-Carniolans—126.
Black-stockinged little girl—172.
Bottom-boards—300.
Bottom-starters in sections—257, 369.
Box-hives, buying bees in—11.
Bravery of bee-keeping—728.
Bread and Honey (poem)—482.
Breeding a pure race of bees—145.
Breeding bees by selection—663, 718.
Breeding the best queens—518.
Breeding up for winter—698.
Brevity sometimes dangerous—389.
Brood-chamber in winter—549.
Brood-combs, replacing—696.
Brood foundation—396.
Brood-frames for extracting—697.
Brood in hives in winter—150.
Brushing bees at night—593.
Brushing bees with feather duster—241.
Building up colonies—376.
Building up colonies for the honey-flow—189.
Bulk comb honey production—257, 378, 682.
Bur-combs—260.
Buying and selling honey between bee-keepers—192.
Buying bees in box-hives—11.
Buying bees or making increase—245.

Caged queen, where to put—742.
Calcium chloride in the cellar—165.
California, a Modern Mecca—752.
California bee-ranches—615.
California honey-conditions—300.
Camping in California (Gathrights)—106.
Canadian Bee Journal sold—228.
Canadian postage rate—389, 430, 486.
Candied honey, getting out combs—54.
Candy feed for bees—756.
Capping on bottom-board—154.
Carbolic acid for swarms—627.
Careless bee-keepers—535.
Carnegie and the bee—126.
Carniolan bees—315, 662.
Carniolans or Italians?—571.
Carrying bees under difficulties—226.
Carrying up dark honey—185.
"Catty" molasses vs. foul-broody honey—451.
Caucasian bees—54, 399, 459, 483, 552, 683, 726.
Cellar-wintering of bees—115, 149, 154, 241, 746.
Cement hive-stands and bottoms—351, 432, 486.
Changing hives—726.
Cheap hives—597.
Chickens eating young ants—174.
Chickens in the apiary—15.
Child and "seated" swarm—712.
Children bee-keepers—631.
Chunk honey—358.
City street swarm—647.
Clarifying beeswax—306.
Cleaning sections of honey—95, 125, 151, 193, 195, 300, 337, 503.
Clipping queens—194, 261, 317, 358, 392, 393, 415, 453, 484, 524, 582, 595.
Closed-end frame—132.
Closed-end to Hoffman or Miller frames—550.
Cold experiment—228.
Colonies for the pasture—114.
Colorado Association's annual report—223.
Colors for painted hives—114.
Comb and extracted honey, ratio of—154.
Comb attached to sections—721.
Combined hive-cover and bee-feeder—72.
Comb-building—567.
Comb-foundation, home-made—756.
Comb-honey misrepresentations—94.
Comb honey production—12, 207, 377, 746.
Comb honey shipping—6.
Comb-levelers—286, 534.
Comb or extracted honey for beginners—351.
Comb or extracted honey, which?—170, 171.
Combs of granulated honey—215.
Commercial letter writers—504.
Commission law in Washington—628.
Control of increase—74, 175.

CONVENTION REPORTS—
Brantford, Ont.—149, 170, 189, 209, 233.
California—596.
Connecticut—487.
Fillmore Co., Minn—126.
Illinois—235, 742.
Kansas—210.
Michigan—91, 130.
Minnesota—46, 86.
National—283, 709.
Ontario—11, 30, 52, 721, 745.
Texas—591.
Worcester Co., Mass—87, 356, 522, 583.
Yorkville, Ill.—127.

Corn-tassel honey—29.
Cotton honey for winter stores—661.
Cotton-seed meal as pollen—192.
Cover-feeder——227.
"Cover Them Over" (poem)—445.
Cow with sweet tooth—628.
Crooked combs—523.
Cross bees—512.
Curious customs—714.

Dampness in hives—34.
Danzenbaker hive and system—377, 417, 595.
Dark bees the hardiest—589.
Dead-beat honey-buyers—627.
Dead bee with pollen—205.

DEATH NOTICES—
Burdett-Coutts, Baroness—93, 251.
Dzierzon, Dr. John—27.
Hammond, Luther—186.
Pryal, A. D.—752.
Stachelhausen, L.—658.
West, David J.—614.
York, Sallie Ward—713.

"De Bizzy Honey Bee"—683.
Dental wax—286.
Depending upon bees—714.
Deserting swarms—697.
Detecting adulterants in honey—389.
Detecting a honey-flow—588.
Deutscher Imkerbund—727.
Difference in bee-eggs—594.
Different prices for same kind of honey—487.
Digestion in bees—27.
Dining-room decoration of bees—282.
Disease carried by the queen—754.
Disease from comb foundation—245.
Distance bees gather nectar—393.
Distance bees go for nectar—94, 590.
Distance of apiary from the highway—508, 594.
Distance to breed pure queens—335, 514.
Distribution of honey—745.
Dividing colonies—628, 660.
Dividing colonies for buckwheat flow—359.
Divisible brood-chamber hive—394, 657.
Do bees carry eggs or larvæ?—592.
Do bees freeze to death?—108.
Does the queen consciously fertilize eggs?—565.
Doubled colonies—265.
Dovetailed hive—266.
Drifting or mixing of bees—370.
Driving out drones—570.